岡部信彦、小泉祐子、平岡真理子、瀬戸成子、杉本徳子、荷見奈緒美、熊谷行広、大塚吾郎、杉下由行、甲賀健司、鈴木理恵子、亜南弥生子、舟久保麻理子、弘光明子、松本要、阿部勇治、氏家無限　潜在的な疫学リンクが疑われたD8型ウイルスによる麻疹広域散発事例、病原微生物検出情、2013, (速報)

2. 学会発表

1. Katsuhiro Komase, Makoto Takeda, Progress towards measles elimination after introduction of supplementary immunization in Japan, Sitges, Spain 7th Vaccine & ISV congress, 2013 年 10 月 27 日～29 日
2. Otsuki N, Sekizuka T, Kubota T, Nakatsu Y, Seki F, Sakai K, Yamaguchi R, Fukuhara H, Maenaka K, Kuroda M, Takeda M. (2013 June 16-21. Granada, Spain) Both the C and V proteins of canine distemper virus play essential roles for the virus replication in human epithelial cells. Negative Strand Virus Meeting 2013.
3. Sakai K, Seki F, Tahara M, Otsuki N, Ami Y, Saijo M, Yamaguchi R, Komase K, Takeda M, Morikawa S. (2013 March. Singapore) Canine distemper virus intrinsically uses monkey receptors and readily adapts to use human receptors as well. 15th International Conference on Emerging Infectious Diseases (EID) in the Pacific Rim.
4. Sakai K, Seki F, Tahara M, Otsuki N, Ami Y, Yamaguchi R, Saijo M, Komase K, Morikawa S, Takeda M. (2013 June 16-21. Granada, Spain) High potential of canine distemper virus in the ability to use macaca and human receptors. Negative Strand Virus Meeting 2013.
5. Tahara M, Abe M, Sakai K, Shirato K, Kanou K, Matsuyama S, Fukuhara H, Maenaka K, Ami Y, Esumi M, Kato A, Takeda M. (2013 June 16-21. Granada, Spain) Importance of the P2 and P3 residues of fusion proteins of respiratory viruses for their proteolytic activation by TMPRSS2. Negative Strand Virus Meeting 2013.
6. Yoshio Mori, Epidemiological Analysis on rubella epidemic in Japan. The 7th China-Korea-Japan forum on communicable disease control and prevention. Beijing China, 2013.11.25
7. Yoshio Mori, Molecular epidemiology and laboratory diagnosis of rubella in Japan. The 10th Japan-Taiwan symposium on vaccine preventable diseases and vector-borne diseases. 2013.9.12-13
8. 池野翔太、鈴木基臣、寺原和孝、石毛真行、駒瀬勝啓、竹田誠、森川裕子、中山哲夫、柳雄介、竹山春子、横田恭子、ヒト化マウスの麻疹ウイルスベクター評価系の応用、第 61 回日本ウイル

ス学会学術集会、神戸、2013 年 11 月 10 日～12 日

9. 庵原俊昭、菅　秀、浅田和豊：MR ワクチン 4 期接種が思春期集団の麻疹風疹疫学に及ぼした効果. 第 54 回日本臨床ウイルス学会 2013.6.8-9
10. 内野清子、三好龍也、岡山文香、芝田有理、田中智之、森嘉生、駒瀬勝啓、竹田誠、堺市における風疹の流行状況と検査結果の解析、評価、第 61 回日本ウイルス学会学術集会、神戸、2013 年 11 月 10 日～12 日
11. 大場邦弘、小田智三、岡本貴世子、森嘉生　風疹が疑われ、リアルタイム RT-PCR 法による遺伝子検査を実施した 13 例の検討　第 62 回日本感染症学会東日本地方会学術集会　東京　2013 年 10 月 30 日～11 月 1 日
12. 加瀬 哲男、倉田 貴子、上林 大起、永井 沙織、西村 公志、松本　一美、大平 文人、松井 陽子、福村 和美、松本 治子、高橋 和郎、駒野 淳、玉井　圭、北島　博之、大阪府における風疹の流行状況と先天性風疹症候群患児への支援体制について、第 45 回　日本小児感染症学会総会・学術集会　2013 年 10 月 26 日
13. 加瀬哲男、倉田貴子、上林大起、高橋和郎、駒野淳、　麻疹における家族内 2 次発生について、第 17 回日本ワクチン学会学術集会　2013 年 11 月 30 日
14. 上林大起、倉田貴子、片山雄大、駒野淳、加瀬哲男、高橋和郎、風疹ウイルス感染ハイスループット評価システムの確立と中和抗体価測定への応用≪優秀ポスター賞≫、第 61 回日本ウイルス学会学術集会　2013 年 11 月 10 日
15. 上林大起、倉田貴子、高橋和郎、駒野淳、加瀬哲男、先天性風疹症候群（CRS）および関連症例について　第 17 回日本ワクチン学会学術集会　2013 年 11 月 30 日
16. 大谷早苗、綾田稔、竹内薫、竹田誠、小倉壽、ヌードマウスの脳内で持続感染した組換え麻疹ウイルス IC323 に生じた偏在高頻度変異、第 61 回日本ウイルス学会、神戸、2013 年 11 月 10-12 日
17. 大槻紀之、中津祐一郎、久保田耐、関塚剛、酒井宏治、黒田誠、山口良二、竹田誠、イヌジステンパーウイルスの V タンパクはヒト肺胞上皮細胞でのウイルス増殖において重要な役割を果たす、第 61 回日本ウイルス学会、神戸、2013 年 11 月 10-12 日
18. 倉田貴子、上林大起、駒野淳、加瀬哲男、高橋和郎、ヒト胎盤由来細胞に麻疹ウイルス感染が及ぼす細胞生理学的影響、第 61 回日本ウイルス学会学術集会　2013 年 11 月 10 日
19. 児玉洋江、成相絵里、麻しんを疑う症例からの風しんウイルス遺伝子検出事例について、第 41 回北陸公衆衛生学会（富山県）、2013 年 11 月
20. 児玉洋江、成相絵里、崎川曜子、北陸地区麻疹・風疹レファレンスセンター報告、地方衛生研究所全国協議会東海北陸支部微生物部会（富山県）、2014 年 3 月
21. 駒瀬勝啓、竹田誠、庵原俊昭、皆川洋子、安井善宏、山下照夫、改田厚、秋

吉京子　麻疹ウイルス流行株の推移とウイルス鑑別方法の検討、第54回日本臨床ウイルス学会、倉敷、2013年6月8日～9日

22. 駒野淳、倉田貴子、上林大起、西村公志、大平文人、松井陽子、福村和美、松本治子、高橋和郎、入谷展弘、久保英幸、長谷篤、廣川秀徹、吉田秀樹、塩見正史、信田真理、八木由奈、宮浦徹、内野清子、田中智之　大阪府における風疹流行の現状と疫学解析、第72回日本公衆衛生学会総会、2013年10月

23. 酒井宏治、關文緒、網康至、染谷健二、田原舞乃、大槻紀之、西条政幸、森川茂、山口良二、駒瀬勝啓、竹田誠、犬ジステンパーウイルスのヒトSLAM利用応獲得に必要な変異、第61回日本ウイルス学会学術集会、神戸、2013年11月10日～12日

24. 酒井宏治、關文緒、網康至、西條政幸、森川茂、山口良二、駒瀬勝啓、竹田誠、サルから分離された犬ジステンパーウイルスのヒト受容体利用能獲得に必要な変異、Nectin-4 expressing cells in canine central nervous system、第156回日本獣医学会、岐阜、2013年9月20-22日

25. 坂田真史、鈴木忠樹、大槻紀之、岡本貴世子、竹田誠、森嘉生、ウイルスプロテアーゼを利用した風疹ウイルス検出系の検討、第61回日本ウイルス学会、神戸、2013年11月10-12日

26. 陳甦ルイ、福原秀雄、伊藤由梨、酒匂幸、橋口隆生、梶川瑞穂、柳雄介、竹田誠、前仲勝実、Nectin4を介するモルビリウイルスの細胞侵入機構の解明、第61回日本ウイルス学会、神戸、2013年11月10-12日

27. 菅谷亜弓、二井　栄、伊佐地真知子、二井立恵、庵原俊昭：妊婦の麻疹抗体スクリーニング法に関する検討. 第17回日本ワクチン学会学術集会 2013.11.30-12.1 津

28. 竹田誠、田原舞乃、駒瀬勝啓、麻疹ウイルスの抗原性の安定性は強固に保証されているか　第17回日本ワクチン学会、津、2013年11月30日～12月1日

29. 竹田　誠、小川知子、七種美和子、皆川洋子、安井善宏、加瀬哲夫、田中智之、庵原俊昭、駒瀬勝啓：2012年度を終えて：実験室からみた、わが国の麻疹排除の現状. 第54回日本臨床ウイルス学会 2013.6.8-9

30. 竹田誠、駒瀬勝啓、森嘉生、木村博一、長野秀樹、岡野素彦、青木洋子、小川知子、七種美和子、児玉洋江、皆川洋子、加瀬哲男、濱岡修二、世良暢之、平良勝也、田中智之、住友眞佐美、庵原俊昭、島田智恵、大日康史、調恒明、小澤邦壽、2012年～2013年、麻疹排除と風疹再興：実験室の視点から、第45回小児感染症学会、札幌、2013年10月26～27日

31. 竹田　誠、わが国の麻疹風疹対策ー麻疹風疹検査診断と注意点:世界の麻疹風疹事情と日本の取り組み、栃木県小児科医会、小山地区医師会講演会、栃木県小山市、2013年2月19日

32. 竹田　誠、麻疹の国内、世界最新事情:流行、ワクチン、研究、第33回広島小児

アレルギー研究会、広島市、2013 年 2 月 21 日

33. 竹田　誠、麻疹、風疹の国内ならびに海外の動向、地方衛生研究所全国協議会近畿支部ウイルス研究所部会、滋賀県庁、大津、2013 年 9 月 20 日
34. 田原舞乃、酒井宏治、駒瀬勝啓、前仲勝実、竹田誠、受容体結合領域を含む複数の主要エピトープを変化させた麻疹ウイルスの解析、第 61 回日本ウイルス学会学術集会、神戸、2013 年 11 月 10 日～12 日
35. 根来麻奈美、長尾みづほ、谷口清州、菅　秀、藤澤隆夫、庵原俊昭、看護学校学生を対象とした麻疹・風疹の血清疫学調査、第 67 回国立病院総合医学会 2013.11.8-9 金沢
36. Watanyoo Pratakpiriya、關文緒、大槻紀之、酒井宏治、福原秀雄、片本宏、平井卓哉、Somporn Techangamsuwan、Nguyen Lan、前仲勝実、竹田誠、山口良二、Nectin4 は上皮に局在する犬ジステンパーウイルス特異的受容体である、第 156 回日本獣医学会、岐阜、2013 年 9 月 20-22 日
37. 皆川洋子、平成 25 年度東海地区麻疹・風疹レファレンスセンター報告、平成 25 年度地方衛生研究所全国協議会東海・北陸支部微生物部会、高岡市、2014 年 3 月 7 日
38. 森嘉生、坂田真史、岡本貴世子、大槻紀之、安楽正輝、竹田誠、風疹ウイルス非構造蛋白質 p150 のアクチンとの共局在の生物学的意義、第 61 回日本ウイルス学会、神戸、2013 年 11 月 10-12 日
39. 森　嘉生、敵を知り、闘うために　風疹ウイルス・検査・ワクチン、第 56 回感染・免疫懇話会講演会　2013 年 3 月 21 日
40. 森　嘉生、国内外における風しん／CRS の問題、平成 25 年度感染症危機管理研修会　2013 年 10 月 16 日～17 日
41. 森　嘉生、最近話題の感染症サルへの脅威は？風疹、第 17 回予防衛生協会セミナー　2013 年 11 月 15 日
42. 森　嘉生、風疹のウイルス診断 Up to Date、第 18 回 SRL 感染症フォーラム 2013 年 12 月 11 日
43. 平井卓哉、Nguyen Lan、竹田誠、山口良二、Nectin-4 expressing cells in canine central nervous system、第 156 回日本獣医学会、岐阜、2013 年 9 月 20-22 日
44. 安井善宏、小林慎一、山下照夫、皆川洋子、発疹症検体における麻疹・風疹ウイルス遺伝子同時検査の試み、第 54 回日本臨床ウイルス学会学術集会、2013 年 6 月 8-9 日、倉敷市

3. その他

1. シンポジウム　駒瀬勝啓、麻疹の状況と検査診断について、衛生微生物技術協議会第 34 回研究会　名古屋　2013 年 7 月 11 日～12 日
2. ウェブページからの情報提供
   麻しん患者調査事業における麻しん患者報告状況(2013 年)(2014 年)
   http://www.pref.aichi.jp/eiseiken/2f/msl/msl_8.html
   http://www.pref.aichi.jp/eiseiken/

2f/msl/msl_2014.html（政令市を含む愛知県内医療機関から届出の翌開庁日中に掲載・更新）

3. マスメディアへの情報提供

愛知県における風疹の流行状況、予防接種、ウイルスと PM2.5 の比較について

名古屋テレビ「ドデスカ！」クエスチョン枠内

2013 年 4 月 1 日放送

「東海にも風疹じわり」中日新聞

2013 年 4 月 5 日付朝刊

風疹の流行状況、予防法等について

東海テレビ放送　スーパーニュース枠内

2013 年 4 月 8 日放送

風疹の流行状況、予防接種対象等について

ＣＢＣ中部日本放送　「イッポウ！」枠内

2013 年 4 月 10 日放送

風疹の流行状況、予防接種助成について。

ＮＨＫ名古屋報道部

2013 年 5 月 30 日放送

麻疹ならびに風疹排除およびその維持を科学的にサポートするための実験室検査に関する研究（H25-新興-一般-010）

平成25年度　第1回班会議
平成25年7月24-25日
竹田　誠

Measles is a sensitive indicator of inequities in immunization and health.

麻疹は致死率の高い重篤な疾患である一方、非常に安価で、かつ極めて予防効果の高いワクチンが開発されている。麻疹ワクチンというのは、世界中の全ての人が恩恵を受けるべき、最低限の医療のひとつであり、麻疹罹患者の多い地域（集団）というのは、予防接種ならびに医療の水準の低い地域（集団）である。（症状のはっきりした）麻疹を指標にして、そのような予防接種・医療の不平等を見つけ出し、麻疹対策（麻疹ワクチン施策）を核にして、広くあらゆる感染症対策（特にはワクチン予防可能疾患対策）ならびに医療水準のグローバルな向上を図ることが目的である。

United Nations General Assembly 国連総会
18 September 2000
A/RES/55/2
United Nations Millennium Declaration

The United Nations set eight goals for development, called the Millennium Development Goals (MDGs). These goals set an ambitious agenda for improving the human condition by 2015.

Goal 4: Reduce child mortality
By 2015, reduce by two thirds the mortality rate among children under five

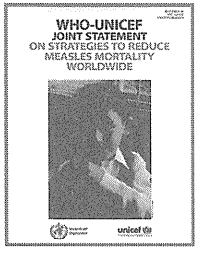
The main indicators for progress towards this goal are:
- Under-five mortality rate;
- Infant mortality rate;
- Proportion of 1-year-old children immunized against measles.

2000年9月	国連ミレニアム開発目標	MDG4：乳幼児死亡削減（麻疹ワクチンを指標）
2001年		日本、推計20-30万人の大流行
2001年12月	WHO/UNICEF　麻疹対策5カ年計画書 2001-2005	2005年までに麻疹死亡を半減。2回のワクチン接種を。定期接種率90%以上の達成を。
2003年5月	世界保健総会：WHA56.20	WHO/UNICEF麻疹対策5カ年計画採択
2003年9月	西太平洋地域委員会会議決議：R54.R3	国家的計画の策定、2回の麻疹ワクチン接種、サーベイランスや実験室診断の確立・強化
2004年	西太平洋地域事務局麻疹排除のガイドライン	'排除' へ向けた運用上の定義と指標（暫定基準）
2005年9月	西太平洋地域事務局：2012年排除目標を公式に発表：WPR/RC56.R8	
2006年1月	WHO/UNICEF　麻疹対策5カ年計画書 2006-2010	2010年までに麻疹死亡を90%減。
2006年6月	日本、2回接種の導入	
2007年	日本、成人例を多数含んだ全国的大流行	263の学校で休校（大学83、高校73）
2007年12月	麻しんに関する特定感染症予防指針（厚生労働省告示第445号）	中高生への補足的ワクチン接種（3期、4期） 定点把握から全数報告へ
2008年		麻疹報告数11,015例
2009年		麻疹報告数739例
2009年1月	厚生労働省　事務連絡（平成21年1月15日）	麻しんの検査診断体制の整備について
2010年10月	西太平洋地域委員会決議：WPR/RC61.R7）	各国毎の麻疹排除検証の仕組みの整備を。 風疹、CRS対策の促進を。
2010年11月	厚生労働省　通知（平成22年11月11日）	麻しんの検査診断について：PCR検査の実施を。

2010年12月	WHO WER 85:489-496. Monitoring Progress Towards Measles Elimination	麻疹排除に関する語句の定義やサーベイランスに関する指標や目標についての記事
2010年		麻疹報告数457例
2011年8月	第20回WPRのEPI/VPDに関する技術顧問会議(TAG)	RVCの立ち上げを。各国においてNCVや専門家審議委員会(ERC)の立ち上げを推奨。
2011年		麻疹報告数434例
2012年4月	世界麻疹風疹対策計画書 2012-2020	2015年までに麻疹死亡を95%減。2015年までに各地域目標を達成。2020年までに5つの地域で麻疹と風疹を排除。
2012年5月	世界ワクチン対策計画書(GVAP)	麻疹、風疹に関して上に同じ。
2012年5月	世界保健総会:WHA65.17	GVAPを採択
2012年8月	第21回WPRのEPI/VPDに関する技術顧問会議(TAG)	RVC、ERCの立ち上げを推奨。麻疹、風疹対策の共同推進を。
2012年11月	予防接種に関する戦略諮問委員会(SAGE)	Framework for verifying elimination of measles and rubella:麻疹風疹排除に関する語句の定義やサーベイランスに関する指標や目標についての記事
2012年		麻疹報告数293例
2013年3月	厚労研究班(H22-新興一般-012)最終報告	証明には不十分だが、実質的に排除に至ったと考えて妥当。
2013年3月	WPR Measles elimination filed guide (draft)	アウトブレイク対応、サーベイランス等
2013年4月	麻しんに関する特定感染症予防指針(厚生労働省告示第445号)改正(適用)	2015年までにWHOの排除認定を受ける。検査診断の徹底。ウイルス遺伝子検査の実施。NVCの設置。
2013年6月	第22回WPRのEPI/VPDに関する技術顧問会議(TAG)	麻疹、風疹対策の協調ならびに強化を。RVC、NVCの役割について。風疹の報告。年長者への対策。

WHO/V&B/01.40
Distr.:General
UNICEF/PD/Measles/01
December 2001

MEASLES INITIATIVE



WHO-UNICEF Joint Statement on Strategies to Reduce
Measles Mortality Worldwide
Strategies for achieving and maintaining interruption of indigenous measles transmission

Goal

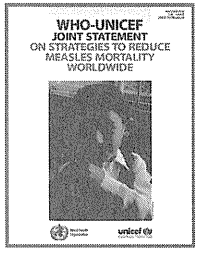
✔ Achieve and maintain interruption of indigenous measles transmission in large geographical areas.

1. Routine immunization — achieve very high (i.e. > 95%) immunization coverage (in each district and nationally) with the first dose of measles vaccine administered through routine services.
2. Second opportunity for measles vaccination — to maintain the number of susceptible population below the critical threshold for 'herd' immunity.
3. Measles surveillance — investigation and laboratory testing of all suspected measles cases (case-based surveillance). Isolation of measles virus should be attempted from all chains of transmission.
4. Improve management of complicated cases — including vitamin A supplementation and adequate treatment of complications.

American Red Cross CDC unicef World Health Organization UNITED NATIONS FOUNDATION

WHO/V&B/01.40
Distr.:General
UNICEF/PD/Measles/01
December 2001

MEASLES INITIATIVE



WHO-UNICEF Joint Statement on Strategies to Reduce
Measles Mortality Worldwide
Strategies for achieving sustainable reduction of measles mortality

Goal

✔ Reduce the number of annual measles deaths by half by 2005.

1. Routine immunization — achieve >90% routine vaccination coverage (in each district and nationally) with at least one dose of measles vaccine administered at 9 months of age or shortly thereafter.
2. Second opportunity for measles vaccination — for all children through routine or supplemental activities.
3. Measles surveillance — establish effective surveillance for measles to report regularly the number, age and vaccination status of children contracting or dying from measles, to conduct outbreak investigations and to monitor immunization coverage.
4. Improve management of complicated cases — including vitamin A supplementation and adequate treatment of complications.

American Red Cross CDC unicef World Health Organization UNITED NATIONS FOUNDATION

世界保健総会(World Health Assembly). WHOの最高意思決定機関であり、全加盟国で構成され、毎年1回5月にジュネーブにて開催される。

56th World Health Assembly
WHA56.20
28 May 2003
Reducing Global Measles Mortality

World Health Organization

1. URGES Member States:
(1) to implement fully the WHO-UNICEF strategic plan for measles mortality reduction 2001-2005 in countries with high measles mortality within their national immunization programmes;
(2) to provide the financial support necessary for full implementation of national immunization programmes in which the strategy to reduce measles mortality is embedded, including measles vaccine for routine and supplementary immunization activities and strengthening of epidemiological and laboratory surveillance for measles and other vaccine preventable diseases;
(3) to use the strategic approach of reducing global measles mortality as a tool for strengthening national immunization programmes, with special emphasis on improving access to immunization services, ensuring safe immunization practices, and enhancing human-resource capability, laboratory networks, epidemiological surveillance and cold-chain systems;

WHA56.20

2. REQUESTS the Director-General:
(1) to work with Member States through regional offices to strengthen national immunization programmes and disease-surveillance systems, using the status of measles control as one of the leading indicators of progress in reducing child mortality;
(2) to strengthen partnerships at global, regional and subregional levels with UNICEF and other international bodies, nongovernmental organizations and the private sector to mobilize the additional resources needed to implement fully the WHO-UNICEF strategy for the expanded programme on immunization and measles mortality-reduction strategies;
(3) to report to the Fifty-seventh World Health Assembly, through the Executive Board, on progress made in implementing this resolution.

WHO Regional Committee for the Western Pacific
54th session
8-12 September 2003

WPR/RC54.R3

Expanded programme on immunization: **measles** and hepatitis B

The Regional Committee,
- Mindful of the high burden of disease, disability, and deaths from vaccine-preventable diseases, **especially measles and hepatitis B;**
- Aware that this burden could be very significantly reduced by use of available vaccines that are safe, effective and inexpensive;
- Noting that in some countries there is a lack of laboratory capacity for confirmation of measles cases;
- **Recalling resolution WHA56.20 on global reduction of measles mortality;**
- **Noting that 95% population immunity is essential to achieve measles elimination;**
- Recognizing that some countries have made significant progress towards achieving this level of immunity;

Global Alliance on Vaccines and Immunization and other partners;
1. DECIDES that, in the Western Pacific Region, **measles elimination and hepatitis B control should be the two new pillars to strengthen the EPI;**
2. CONFIRMS that **measles elimination should be a regional goal** and that the **establishment of a target date should be made at the earliest opportunity and should be based on an annual review of progress;**
3. FURTHER CONFIRMS that the objective of hepatitis B control programmes should be HBsAg prevalence of less than 1% in five-year-olds born after hepatitis B immunization started;
4. **ENDORSES the Western Pacific Regional Plan of Action for Measles Elimination** and the Western Pacific Regional Plan to Improve Hepatitis B Control through Immunization;

Global Alliance on Vaccines and Immunization and other partners;
5. URGES Member States:
(1) **to develop or strengthen national plans for measles elimination** and hepatitis B control as part of overall plans for immunization services;
(2) **to use measles elimination and hepatitis B control strategies to strengthen EPI and other public health programmes, such as prevention of congenital rubella syndrome;**
(3) **to offer, in principle, all children two doses of measles vaccine, taking into account local situations, so that the 95% population immunity of each birth cohort can be achieved and maintained in every district;**
(4) **to develop or strengthen measles surveillance systems and laboratory confirmation of cases;**
(5) to ensure that at least 80% (ideally 95%) of each birth cohort in every district receives three doses of hepatitis B vaccine by the age of 12 months, except in countries where a highrisk approach (i.e. immunization for babies of carrier mothers) has been shown to be effective;
(6) to improve the quality of routinely reported immunization coverage data and to monitor both immunization (including timely scheduled birth dose of hepatitis B vaccine, i.e. within 24 hours of birth) and disease data at district level in order to improve programme management;

Global Alliance on Vaccines and Immunization and other partners;
6. REQUESTS the Regional Director:
(1) to further strengthen technical cooperation with Member States, in particular the improvement of immunization coverage and surveillance, including strengthening laboratory capacity in the Region, in order to achieve measles elimination and to improve hepatitis B control;
(2) to seek the additional resources required to support these activities;
(3) to report on progress regularly to the Regional Committee and to propose a target date for regional measles elimination in due course.

3.1 Operational definition and indicators for 'elimination'

Interim criteria are proposed for an operational definition that a country or area has achieved elimination (see Glossary). Regional experience may lead to modifications of these definitions when the target date for regional elimination is set. The following interim criteria are proposed:

(1) less than one confirmed measles case reported per million population per year (excluding imported cases) – not applicable in countries with less than one million population;

(2) excellent surveillance with comprehensive reporting and investigation of all fever and rash cases and chains of transmission, as demonstrated by:

(a) at least one suspected measles case reported per 100 000 population per year in at least 80% of districts (or equivalent, as used for AFP surveillance);

(b) serum samples adequate for detecting measles IgM collected in at least 80% of suspected measles cases (excluding from the denominator cases that are epidemiologically linked to a laboratory-confirmed case); and

(c) viral isolate obtained from every confirmed chain of transmission (for genotyping to help identify source of virus); and

(3) maintaining 95% immunity to measles in each cohort in every district, as demonstrated by:

(a) at least 95% coverage with two doses of measles-containing vaccine; and

(b) importations lead only to small outbreaks (< 100 cases, < three months duration). The key issue is having adequate quality surveillance, as otherwise measles transmission may not be detected (see *Surveillance*, Section 5).

The Western Pacific Region is now moving towards measles elimination. These guidelines provide guidance for countries to implement the Western Pacific Regional Plan of Action for Measles Elimination as urged by the 2003 Regional Committee Meeting resolution (R54.R3).

GLOSSARY

Measles elimination is a dynamic situation in a large and well-populated geographical area where endemic measles transmission does not occur and where importation of measles virus does not result in sustained transmission. All isolated cases and chains of transmission should be linked to importations.
To maintain elimination, high population immunity must be maintained through appropriate measles immunization.

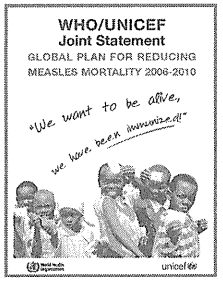
Resolution

Measles Elimination, Hepatitis B Control and Poliomyelitis Eradication

1. DECIDES that the Region should aim by 2012:
   (1) to eliminate measles;
   (2) to reduce the seroprevalence of HbsAg to less than 2% in five year-old children as an interim milestone towards the final regional goal of less than 1% HbsAg;
2. URGES Member States:
   (1) to develop or strengthen national plans for measles elimination and hepatitis B control, as part of comprehensive multi-year plans for immunization services to enable achievement of the twin regional goals;
   (2) to regularly monitor the implementation of activities under measles elimination and hepatitis B control plans;
   (3) to maintain polio-free status by sustaining high-quality acute flaccid paralysis surveillance and high immunization coverage of polio vaccines;
3. REQUESTS the Regional Director:
   (1) to further strengthen technical cooperation with Member States and seek the additional resources required to support country and area activities to achieve the measles elimination and hepatitis B control goals;
   (2) to report regularly to the Regional Committee on progress towards measles elimination and hepatitis B control.

WHO/IVB/05.11 and UNICEF/PD/Measles/05.01
January 2006

WHO/UNICEF Joint Statement
Global Plan for Reducing Measles Mortality 2006–2010



The WHO/UNICEF global plan focuses on 47 priority countries that account for approximately 98% of global measles deaths.

Goals
Across countries and continents, the success of the measles mortality reduction strategy demonstrates that the strategy works and that by the end of 2005 priority countries can cut measles deaths in half. Building on this achievement, **the global goal now is to reduce annual global measles deaths by 90% by 2010 from 2000 estimates. In 2000, the UN Millennium Summit set a goal to reduce the under-five mortality rate by two-thirds, between 1990 and 2015. Routine measles vaccination coverage is used as an indicator and measles mortality reduction is an important step towards achieving this goal.**

MEASLES INITIATIVE

American Red Cross CDC unicef World Health Organization UNITED NATIONS FOUNDATION

○麻しんに関する特定感染症予防指針
（平成十九年十二月二十八日）
（厚生労働省告示第四百四十二号）

厚生労働省

世界保健機関西太平洋地域事務局は、平成二十四年（二千十二年）までに麻しんの排除（国外で感染した者が国内で発症する場合を除き、麻しんの診断例が一年間に人口百万人当たり一例未満であり、かつ、ウイルスの伝播が継続しない状態にあることをいう。以下同じ。）を達成するという目標を掲げており、我が国を含め、世界保健機関西太平洋地域事務局管内の各国は、目標の達成に向けた対策を求められているところである。

本指針はこのような状況を受け、**平成二十四年度までに麻しんを排除し、かつ、その後も排除状態を維持する**ことを目標とし、そのために、国、地方公共団体、医療関係者、教育関係者等が連携して取り組んでいくべき施策についての新たな方向性を示したものである。

第二 原因の究明
二 麻しんの発生動向の調査及び対策の実施
国内で発生したすべての症例を把握するものとする。
三 麻しんの届出基準
当面は臨床での診断をもって届出の判断材料とすることを継続するが、検査室での診断を行った場合には、その結果についても保健所に報告を求めるものとする。麻しん患者の発生数が一定数以下になった場合には、原則として検査室での診断で麻しんと診断した症例のみの報告を求めるものとする。

WER 84, 349–360
28 August 2009

World Health Organization

Measles vaccines: WHO position paper

In accordance with its mandate **to provide guidance to Member States** on health policy matters, **WHO issues a series of regularly updated position papers on vaccines and combinations of vaccines against diseases that have an international impact on public health. These papers, which are concerned primarily with the use of vaccines in large-scale immunization programmes, summarize essential background information on diseases and vaccines, and conclude with the current WHO position concerning their use in the global context.** The papers have been reviewed by a number of experts within and outside WHO, and since 2006 have been reviewed and endorsed by WHO's Strategic Advisory Group of Experts on immunization. **The position papers are designed for use mainly by national public health officials and managers of immunization programmes**. However, they may also be of interest to international funding agencies, the vaccine manufacturing industry, the medical community, scientific media and the public.

第三 発生の予防及びまん延の防止
三 予防接種法に基づく予防接種の一層の充実
1 **中学一年生と高校三年生に相当する年齢の者（麻しん及び風しんに既に罹患したことが確実な者及びそれぞれの予防接種を二回接種した者を除く。）を時限的に追加する**ものとする。

第六 国際的な連携
二 国際機関で定める目標の達成
世界保健機関においては、二回の予防接種において、それぞれの接種率が九十五％以上となることの達成を目標に掲げているほか、世界保健機関西太平洋地域事務局においては、平成二十四年（二千十二年）には同地域から麻しんの排除を達成することを目標に掲げており、我が国も本指針に基づき、麻しん対策の充実を図ることにより、その目標の達成に向けて取り組むものとする。
第七 評価及び推進体制の確立
二 麻しん対策委員会の設置

厚生労働省

事 務 連 絡
平成21年1月15日

麻しんの検査診断体制の整備について

日頃より、感染症発生動向調査事業に対し、ご理解ご協力を賜り厚く御礼申し上げます。さて、麻しんの届出については、感染症の予防及び感染症の患者に対する医療に関する法律（平成10年10月2日法律第114号）の一部改正に伴い、平成20年1月1日より国内で発生したすべての症例を把握することとなり、昨年一年間に11，005人の患者数を報告いただきましたが、そのうち検査診断による届出は、約35％と非常に少ない状況です。

麻しんに関する特定感染症予防指針（平成19年12月28日厚生労働省告示第442号）においては、麻しん患者の発生数が一定数以下になった場合、原則としてすべての発生例を検査診断することとしており、本年度以降、研修会等を開催し、地方衛生研究所の検査体制の強化を図っているところです。

つきましては、麻しん排除に向けた対策のより一層の推進のため、麻しん患者との接触歴が明らかではない第1例は確実に検査診断し、また、二次感染以降の患者についても、各自治体の実状に応じて可能な限り検査診断を実施する体制を整備していただけますよう、貴管内の保健所及び医療機関に周知方よろしくお願いいたします。
ご参考までに、病原体検出マニュアル「麻しん検査マニュアル（第2版）」及び「麻しん排除に向けた積極的疫学調査ガイドライン（第2版）」を添付しますのでご活用ください。

厚生労働省

WPR/RC61.R7

3. REQUESTS the Regional Director:
(1) to establish regional verification mechanisms for measles elimination;
(2) to strengthen technical cooperation with Member States to achieve regional immunization goals;
(3) to seek additional resources to achieve regional goals utilizing frequent interagency coordination committee meetings and other mechanisms;
(4) to report progress periodically to the Regional Committee.

World Health Organization Western Pacific Region

WPR/RC61.R7
14 October 2010
Resolution
Vaccine Preventable Diseases: Measles Elimination, Hepatitis B Control, and Poliomyelitis Eradication

1. REAFFIRMS the 2012 measles elimination goal and the hepatitis B control goal and milestone, and the maintenance of poliomyelitis-free status;
2. URGES Member States:
(1) to commit the human and financial resources necessary to achieve and sustain the measles elimination and hepatitis B control goals, and to maintain poliomyelitis-free status;
(2) to develop and implement workplans to ensure high immunization coverage against measles, hepatitis B and poliomyelitis, and sensitive and timely epidemiologic and laboratory surveillance to achieve measles elimination and maintain poliomyelitis-free status;
(3) to report measles and poliomyelitis, and where feasible rubella, surveillance data to the Regional Office in a regular and timely manner;
(4) to establish an independent national verification process for measles elimination following the establishment by the WHO Regional Office for the Western Pacific of standardized regional verification mechanisms;
(5) to accelerate control of rubella and the prevention of congenital rubella syndrome;
(6) to vigorously implement all activities to maintain poliomyelitis-free status;

厚生労働省

健感発1111第2号
平成22年11月11日

麻しんの検査診断について

麻しん対策については、「麻しんに関する特定感染症予防指針」に基づき、平成24年までに麻しんを排除することを目標として取り組んでおり、その一環として、平成21年1月15日付け厚生労働省健康局結核感染症課事務連絡「麻しんの検査診断体制の整備について」により、麻しん患者の検査診断の実施に関する体制整備をお願いしているところです。

さて、麻しん患者の報告の約6割が「IgM抗体検査」による検査診断に基づいておりますが、麻しんの「IgM抗体検査」は、麻しん以外の発疹性ウイルス疾患に罹患している場合にも陽性になることがあると指摘されています。このため、**麻しんの確定診断には、遺伝子検査（RT-PCR法）を含めた精度の高い検査を実施していく必要があります**。

麻しん患者の報告数は、平成20年11,015件、平成21年741件、本年396件（第40週まで）と顕著に減少しており、麻しん排除に向けた取り組みを進めるためにも、麻しんの正確な診断が一層重要となっています。

このような状況を踏まえ、**第6回麻しん対策推進会議（平成22年11月1日開催）において、麻しん患者と診断された患者の検体を可能な限り確保し、遺伝子検査を推進すべきとの提言がなされました。**
今後は、**地方衛生研究所及び保健所等が連携して、麻しん患者の、発症早期の検体（咽頭ぬぐい液、血液、尿）を可能な限り確保し、遺伝子検査を実施する**とともに、別添を参考に、管内の医療機関に、感染症法に基づく麻しん患者の発生の届出と併せて、患者の検体の提出を依頼するようお願いいたします。

なお、都道府県等が行う当該遺伝子検査は、感染症法第15条に基づく積極的疫学調査の一環として行うことができるものであり、感染症発生動向調査事業の国庫補助の対象となります。

Definitions/ Indicators for monitoring progress towards measles eliminatin/ Targets suggestive of having achieved measles elimination (WHO)

Definition	Definition	Definition
Measles elimination: The absence of ***endemic measles transmission*** in a defined geographical area for ≧12 months in the presence of a high-quality surveillance system.	***An endemic measles case:*** a case of measles confirmed by laboratory testing or epidemiological linkage resulting from endemic transmission of measles virus.	***Endemic measles transmission:*** the existence of continuous transmission of indigenous or imported measles virus that persists for ≧12 months in any defined geographical area.
	An imported case of measles: a case with virological or epidemiological evidence, or both, of exposure outside the region or country during the 7-21 days prior to rash onset.	
	A measles case related to importation: a locally acquired infection occurring as part of a chain of transmission originated by an imported case as supported by epidemiological or virological evidence, or both. (if transmission of measles cases related to importation persists for ≧12 months, cases are no longer considered to be import-repated, they are considered to be endemic.)	

A minimum set of recommanded core indicators and targets to verify the quality of a surveillance system		
Indicators	Targets	Definition
Reporting rate:	At the national level, a rate of ≧2 ***discarded measles cases***/100 000 population per year. In addition, ≧2 ***discarded measles case*** should be reported annually per 100 000 population in ≧80% of subnational administrative units.	***Discarded measles case:*** a case that meets the clinical case definition for measles and that has been investigated and discarded as a non-measles case using (a) laboratory testing in a proficient laboratory or (b) epidemiological linkage to an outbreak that has been confirmed by a laboratory not to be measles.
Laboratory confirmation:	***Specimens adequate for detecting acute measles infection*** should be collected from ≧80% of ***suspected cases*** and tested in a proficient laboratory. (Any clinical cases of measles that are not tested by a laboratory and are (a) confirmed as measles by epidemiological linkage or (b) discarded as non-measles by epidemiological linkage to laboratory-confirmed case of another communicable disease or by epidemiological linkage to a case negative for measles IgM should be excluded from the denominator of suspected cases)	***Suspected case:*** any case under investigation with fever and maculopapular rash and any of the following: cough, coryza or conjunctivitis or any case for which a clinician suspects measles infection
		Adequate samples for serology are those collected within 28 days ater rash onset that consist of ≧0.5ml serum of ≧3 fully filled circles of dried blood on a filter-paper, or oral fluid For oral fluid samples, the sponge-collection device should be rubbed for about 1 minute along the gum until the device is thoroughly wet.
Viral detection:	***Samples adequate for detecting measles virus*** should be collected from ≧80% of laboratory-confirmed ***outbreaks*** and tested in an accredited laboratory	***Outbreak:*** ≧2 confirmed cases are temporally related (with dates of rash onset occurring between 7 and 21 days apart) and are epidemiologically or virologically linked, or both.
		Adequate samples: for virus isolation, adequate throat or urine samples are those collected within 5 days after rash onset. For virus detection using molecular techniques, adequate throat samples are those collected ≦14 days after rash onset, and adequate oral fluid samples are those collected ≦21 days after rash onset.
Adequacy of investigation:	At a minimum, ≧80% of all suspected measles cases should have had ***an adequate investigation*** initiated within 48 hours of notification.	***An adequate investigation*** includes at a minimum collection of all of the following data from each suspected case of measles: name or identifiers, place of residence, place of infection (at least to distinct level), age (or date of birth), sex, date of rash onset, date of specimen collection, vaccination status, date of last vaccination, date of notification and date of investigation (excluding cases that are either confirmed as measles by epidemiological linkage or discarded as non-measles by being epidemiologically linked to another laboratory-confirmed case of communicable disease or by epidemiological linkage to a case negative for measles [illegible]

The 2 basic measures for monitoring progress towards elimination of measles.		
	Targets	Definition
Vaccine coverage	Achieving and maintaining ≧95% coverage annually with both MCV1 and MCV2 in all districts, or their administrative equivalent, and nationally	
Incidence	An incidence of <1 measles case confirmed by laboratory or epidemiological linkage (excluding clinically compatible and imported cases) per 1 000 000 population (Incidence per 1 000 000 population should be determined only for confirmed measles cases (i.e. either laboratory confirmed or confirmed by epidemiological linkage) that result from transmission within the country, this incidence measure excludes ***clinically compatible*** and imported cases)	***A clinically compatible measles case:*** a case that meets the clinical case definition for measles but for which no adequate blood specimen was taken and which has not been linked epidemiologically to another case positive for measles IgM or another laboratory-confirmed communicable disease
The achievement of individual surveillance indicators, or coverage or incidence levels, does not mean elimination has been achieved, but rather that all of the information on the quality of surveillance and measures for monitoring progress need to be reviewed and a judgment made after all the evidence has been considered.		

Reference: WHO WER (2010) 85, 489-496

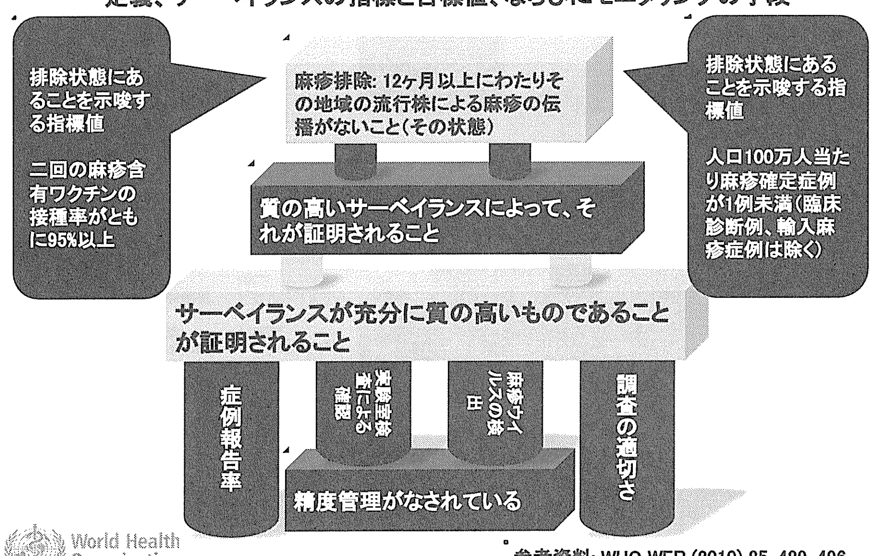
WER 85, 489-496
3 December 2010
Monitoring Progress Towards Measles Elimination

Definitions

2. Measles elimination: the absence of endemic measles transmission in a defined geographical area (e.g. region) for ≥12 months in the presence of a well performing surveillance system.

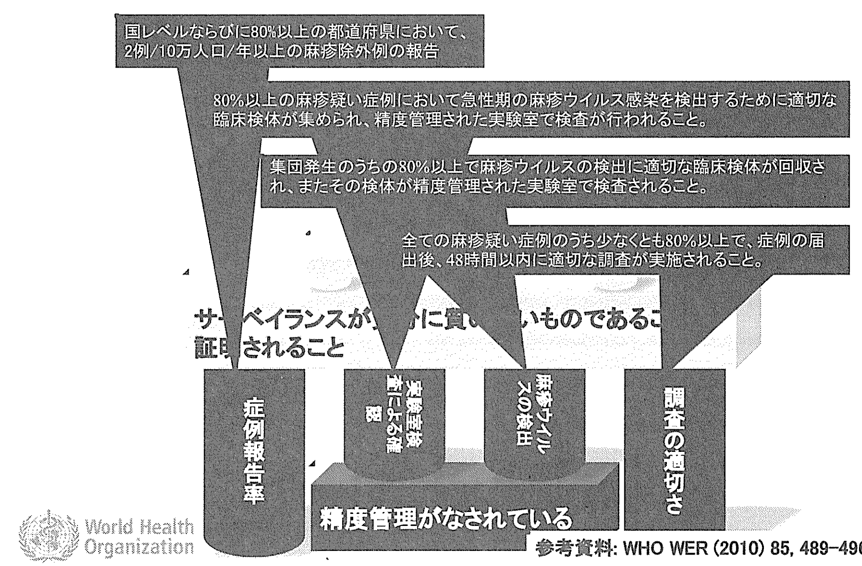
In areas where incidence is low the following target has been proposed as a measure of near elimination: an incidence of <1 measles case confirmed by laboratory or epidemiological linkage (excluding clinically compatible and imported cases) per 1 000 000 population; the numerator is total number of measles cases confirmed by laboratory or epidemiological linkage, excluding imported cases.

WHO(2010年):麻疹排除へ向けての進展モニタリング
定義、サーベイランスの指標と目標値、ならびにモニタリングの手段



参考資料: WHO WER (2010) 85, 489-496

WHO(2010年):麻疹排除へ向けての進展モニタリング
定義、サーベイランスの指標と目標値、ならびにモニタリングの手段



参考資料: WHO WER (2010) 85, 489-496

		基準値(目標値)	オーストラリア	カナダ	イングランドとウェールズ	メキシコ	韓国	アメリカ合衆国
			参考資料4	参考資料10	参考資料7	参考資料5、6	参考資料2、3	参考資料8、9
排除について公表年			2009年	2004年	2003年	2000年	2007年	2000年
排除達成の時期			2005年	1998年	1995年	1997年	2002年	1997年
症例数	輸入例を除く確定症例数	人口100万人当たり1未満	達成年あり	達成年あり	達成年あり	達成	達成	達成
サーベイランスの質を示すための基準	麻疹除外症例の報告数	人口10万人あたり2以上	未達成	約17-22	約4.4	約10	達成	達成
	48時間以内の適切な調査	80%以上の麻疹疑い症例で	記載なし	記載なし	記載なし	達成	達成	記載なし
	適切な検査検体の採取	80%以上の麻疹疑い症例で	記載なし	記載なし	記載なし	達成	達成	記載なし
	ウイルスの検出に適切な検体の採取	80%以上の流行において	記載なし	記載なし	未達成	記載なし	達成	記載なし
高い免疫保有率	2回のワクチン接種率	95%以上	達成	1回のワクチンで95%以上	未達成	達成	達成	少なくとも1回のワクチンで95%以上
	地域性の流行株について	存在しないこと	達成	達成	達成	報告なし?	達成	達成

主参考資料:Heywood et al. (2009) Bull World Health Organ 87:64-71

主要参考資料
1. WHO. (2010) Monitoring progress towards measles elimination. WER 85; 489-496.
2. CDC (2007) Elimination of measles, South Korea, 2001-2006. MMWR. 56;304-307
3. WHO (2007) Elimination of measles in the Republic of Korea, 2001-2006. WER. 82; 118-124.
4. Heywood AE et al. (2009) Elimination of endemic measles transmission in Australia. Bull World Health Organ 87;64-71.
5. Santos JI et al. (2004) Measles in Mexico, 1994-2001: Interruption of endemic transmission and lessons learned. JID. 189(Suppl 1);S243-250.
6. CDC (2000) Measles, rubella, and congenital rubella syndrome, United States and Mexico, 1997-1999. MMWR. 49;1048-1050.
7. Ramsay ME et al. (2003) The elimination of indigenous measles transmission in England and Wales. JID. 187(Suppl 1);S198-207.
8. Katz SL, and Hinman AR. (2004) Summary and conclusions: Measles elimination meeting, 16-17 March 2000. JID. 189(Suppl 1);S43-47.
9. Papania MJ, and Orenstein WA. (2004) Defining and assessing measles elimination goals. JID. 189(Suppl 1);S23-26.
10. King A et al. (2004) Measles elimination in Canada. JID. 189(Suppl 1);S236-242.
11. Indicators for monitoring progress towards elimination and targets suggestive of having achieved elimination (last modified on March 3, 2008)
12. WHO/WPRO (2007) Monitoring measles surveillance and progress towards measles elimination. Measles Bulletin. 13;1-6.
13. WHO/PAHO (2008) Plan of action for the documentation and verification of measles, rubella, and congenital rubella syndrome in the region of the America. Synopsis (draft).
14. WHO/PAHO (2009) Plan of action. Documentation and verification of measles, rubella, and congenital rubella syndrome elimination in the region of the America. Technical document.
15. WHO/EURO (2010) Eliminating measles and rubella. Framework for the verification process in the WHO European region (draft).
16. WHO/EMRO (2010) Guidelines for the documentation and verification of measles, rubella and congenital rubella syndrome elimination in the Eastern Mediterranean region (draft).
17. WHO/WPRO (2004) Field guidelines for measles elimination.
18. WHO/WPRO (2010) (draft) Technical consultation on regional verification of measles and rubella elimination.

WER 86, 301-316
15 July 2011

World Health Organization

Rubella vaccines: WHO position paper

In accordance with its mandate to provide guidance to Member States on health policy matters, WHO issues a series of regularly updated position papers on vaccines and combinations of vaccines against diseases that have an international public health impact. These papers are concerned primarily with the use of vaccines in large-scale immunization programmes; they summarize essential background information on diseases and vaccines, and conclude with the current WHO position on the use of vaccines worldwide. The papers have been reviewed by external experts and WHO staff, and since 2006 they have been reviewed and endorsed by the WHO Strategic Advisory Group of Experts (SAGE) on Immunization. The position papers are designed to be used mainly by national public health officials and managers of immunization programmes. They may also be of interest to international funding agencies, vaccine manufacturers, the medical community, the scientific media and the public.

第20回WHO西太平洋地域(WPR)予防接種およびワクチンで予防可能疾患に関する技術顧問会議

20th Meeting of the Technical Advisory Group (TAG) on Immunization and Vaccine Preventable Diseases in the Western Pacific Region

2011年8月9～12日、フィリピン、マニラ

年1回開催される。ポリオ・麻疹・ジフテリア・百日咳・破傷風・結核の6種類のEPI (Expanded Program on Immunization)ワクチンに加えて、地域で問題になるB型肝炎・日本脳炎などのWPRにおける感染症の発生状況の推移、対策としてのワクチンプログラムが有効に機能しているかなどについて各国が発表し意見交換を行い、さらなる対策について技術顧問会議がWHOに対し助言を行うものである。IASR 2011年9月号 岡部信彦

World Health Organization Western Pacific Region

技術顧問グループ(TAG)からのRecommendations(助言)

WPR/RC61.R7決議の則りRegional verification commission (RVC)(麻しん排除の達成状況を検証する地域委員会)を立ち上げること。国ごとに排除の進展状況が大きくことなるので、RVCの役割とは、排除達成の成否を検証することのみではなく、排除へ向けての活動の評価を含めること。麻疹の排除の検証においてはさまざまな種類のエビデンスを考慮に入れること。

TAGとしては、「一年以上、土着の株による流行がないこと」という麻疹排除の定義に賛同し、支持する。しかしながら、人口100万人当たり1例未満を達成することは、(輸入例、輸入関連症例がその数を上回る可能性を考慮し)必ずしも必要ではないと考える。

各国は流行実態をさらに明らかにするため、サーベイランスや症例調査のさらなる向上を目指すこと(ウイルス学的検査のサンプル収集(咽頭拭い液など)を含む)。各症例の適切な分類(判断)をサポートするためのExpert Review Committee(専門家審議委員会)を立ち上げるのもよい。

World Health Organization
Western Pacific Region

Global Measles and Rubella Strategic Plan 2012–2020

MILESTONES

By end 2015

- Reduce annual measles incidence to less than five cases per million and maintain that level.
- Achieve at least 90% coverage with the first routine dose of measles-containing vaccine (or measles- rubella-containing vaccine as appropriate) nationally, and exceed 80% vaccination coverage in every district or equivalent administrative unit.
- Achieve at least 95% coverage with M, MR or MMR during supplementary immunization activities (SIAs) in every district.
- Establish a rubella/CRS elimination goal in at least three additional WHO regions.
- Establish a target date for the global eradication of measles.

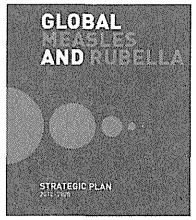
By end 2020

- **Sustain the achievement of the 2015 goals.**
- **Achieve at least 95% coverage with both the first and second routine doses of measles vaccine (or measles- rubella-containing vaccine as appropriate) in each district and nationally.**
- **Establish a target date for the global eradication of rubella and CRS.**

MEASLES & RUBELLA INITIATIVE

American Red Cross CDC unicef World Health Organization UNITED NATIONS FOUNDATION

Global Measles and Rubella Strategic Plan 2012–2020
24 April 2012



GOALS

By end 2015

- Reduce global measles mortality by at least 95% compared with 2000 estimates.
- **Achieve regional measles and rubella/CRS elimination goals.**

By end 2020

- **Achieve measles and rubella elimination in at least five WHO regions.**

MEASLES & RUBELLA INITIATIVE

American Red Cross CDC unicef World Health Organization UNITED NATIONS FOUNDATION

65th World Health Assembly
A65/22
11 May 2012
Draft Global Vaccine Action Plan

World Health Organization

DECADE of VACCINES COLLABORATION

SUMMARY OF RECOMMENDED INDICATORS

Goal-level indicators

Goal	By 2015	By 2020
Achieve a world free of poliomyelitis	• Interrupt wild poliovirus transmission globally	• Certification of poliomyelitis eradication
Meet global and regional elimination targets	• Neonatal tetanus eliminated in all WHO regions • Measles eliminated in at least four WHO regions • Rubella/congenital rubella syndrome eliminated in at least two WHO regions	• Measles and rubella eliminated in at least five WHO regions

65th World Health Assembly
WHA65.17
26 May 2012
Global Vaccine Action Plan

1. ENDORSES the Global Vaccine Action Plan;

2. URGES Members States:

(1) to apply the vision and the strategies of the Global Vaccine Action Plan in order to develop the vaccines and immunization components of their national health strategy and plans, paying particular attention to improving performance of the Expanded Programme on Immunization, and according to the epidemiological situation in their respective countries;

(2) to commit themselves to allocating adequate human and financial resources to achieve the immunization goals and other relevant key milestones;

(3) to report every year to the regional committees during a dedicated Decade of Vaccines session, on lessons learnt, progress made, remaining challenges and updated actions to reach the national immunization targets;

3. REQUESTS the Director-General:

(1) to foster alignment and coordination of global immunization efforts by all stakeholders in support of the implementation of the Global Vaccine Action Plan;

(2) to ensure that the support provided to the Global Vaccine Action Plan's implementation at regional and country level includes a strong focus on strengthening routine immunization;

(3) to identify human and financial resources for the provision of technical support in order to implement the national plans of the Global Vaccine Action Plan and monitor their impact;

(4) to mobilize more financial resources in order to support implementation of the Global Vaccine Action Plan in low-income and middle-income countries;

(5) to monitor progress and report annually, through the Executive Board, to the Health Assembly, until the Seventy-first World Health Assembly, on progress towards achievement of global immunization targets, as a substantive agenda item, using the proposed accountability framework to guide discussions and future actions.

21st Meeting of the Technical Advisory Meeting (TAG) on Immunization and Vaccine Preventable Diseases (VPD) in the Western Pacific Region (WPR)
Manila, 21-23 August 2012

Measles Elimination and Rubella Control

Conclusions

The Regional Committee in its 2005 meeting endorsed the year of 2012 as the target year of measles elimination in the Western Pacific Region. All countries and areas in the Region have made tremendous efforts to achieve and sustain measles elimination. As a result, the Region is making rapid and remarkable progress and now is on the verge of eliminating measles. However, some critical challenges remain to interrupt endemic transmission eventually in all countries and areas, requiring greater political commitment and resources and intensified efforts.

The TAG acknowledges the good progress made in the Region towards establishing the regional verification mechanisms for measles elimination, including criteria, indicators, structure and processes.

Recommendations

The TAG reaffirms the critical importance, based on the 2009 WHO measles vaccine position paper.

The TAG urges all countries and areas to assess their measles surveillance performance by province and district, to plan activities to address existing surveillance gaps and to improve sensitivity and specificity of surveillance, emphasizing case detection and notification, in-depth case investigation, sample collection for serology and virus identification (blood and swab), and proper case classification.

The TAG advises that every country and area should comprehensively describe every measles case and the affected community, including social-economic and service delivery details, to help guide a decision on rational outbreak control interventions.

The TAG recommends all countries to implement the 2010 TAG recommendation calling for establishment of Expert Review Committees (ERC) whenever possible, while clear instruction should be developed to ensure ERC functions properly.

Recommendations

The TAG emphasizes that regular risk assessment, **adequate preparedness and response to measles outbreak** (caused by either endemic or imported measles virus) are critical for all countries and areas to achieve and sustain measles elimination.

The TAG suggests countries and areas to **synergize measles elimination and rubella control activities**, through using measles and rubella combination vaccines and integrating measles and rubella surveillance whenever possible.

The TAG acknowledges the efforts of **the WHO measles and rubella laboratory network** to support the regional goal. It encourages network laboratories with pending accreditation status to be accredited as soon as possible and high performance level of all network laboratories to be maintained.

World Health Organization
Western Pacific Region

WHO Strategic Advisory Group of Experts (SAGE) on Immunization
6-8 November 2012
予防接種に関する戦略諮問委員会(Strategic Advisory Group of Experts on Immunization: SAGE)は、ワクチンの研究開発から予防接種の配分に至るまでの事項を取り上げて、WHO 事務局長に報告する。

Framework for Verifying Elimination of Measles and Rubella
SAGE Working Group on Measles and Rubella
(Draft of 18 October 2012)

World Health Organization

Definitions for verifying measles and rubella elimination

Measles elimination: **the absence of endemic measles transmission in a defined geographical area (e.g., region or country) for ≥12 months in the presence of a well performing surveillance system.**

Note: **verification** of measles elimination takes place after **36 months** of interrupted measles virus transmission.

Endemic measles or rubella virus transmission: the existence of continuous transmission of indigenous or imported measles virus or rubella virus that persists for ≥12 months in any defined geographical area.

Endemic measles or rubella case: laboratory or epidemiologically-linked confirmed cases of measles or rubella resulting from endemic transmission of measles or rubella virus.

Epidemiologically linked confirmed measles case: a clinically-compatible case of measles that has not been confirmed by a laboratory but that was geographically and temporally related (**with dates of rash onset occurring between 7 and 21 days apart**) to a laboratory-confirmed case or (in the event of a chain of transmission) to another epidemiologically confirmed measles case

Measles or rubella outbreak in an elimination setting: **a single laboratory confirmed case**.

Suspected case of measles or rubella: a patient in whom a health-care worker suspects measles or rubella infection or a patient with fever and maculopapular (non-vesicular) rash.

Laboratory confirmed measles case or rubella case: a clinically-compatible case of measles or rubella that has been confirmed by a proficient laboratory.

Note: a proficient laboratory is one that is WHO accredited and/**or has an established quality assurance programme**.

Non-measles non-rubella discarded case: a suspected case that has been investigated and discarded as a non-measles and non-rubella case using (a) laboratory testing in a proficient laboratory or (b) epidemiological linkage to a laboratory-confirmed outbreak of another communicable disease that is neither measles nor rubella.

Criteria for verifying elimination

Three criteria for verifying elimination are recommended based on experience with assessing measles and rubella elimination in the Region of the Americas. They are:

1. documenting the **interruption** of **endemic** measles, or rubella, **virus transmission** for a period of **at least 36 months** from the last known endemic case
2. the presence of a high-quality surveillance system that is sensitive and specific enough to detect imported and import-related cases, and
3. **genotyping evidence supporting interruption of endemic transmission**.

All 3 criteria are necessary to verify elimination at the regional level. As some small countries may not have genotyping information prior to interruption of endemic transmission, this criterion is not an absolute requirement for determining if elimination has been achieved at the country level.

Surveillance indicators

Reporting rate of discarded nonmeasles non-rubella cases: Reporting rate of discarded non-measles non-rubella cases at the national level (Target: ≥2 cases per 100 000 population per year)

Laboratory confirmation: Proportion of suspected cases with adequate specimens for detecting acute measles or rubella infection collected and tested in a proficient laboratory (Target: >80%). Any suspected cases of measles that are not tested by a laboratory and are (a) confirmed as measles by epidemiological linkage or (b) discarded as non-measles by epidemiological linkage to another laboratory confirmed communicable disease case should be excluded from the denominator of suspected cases.

Note: Adequate specimens are: blood sample, minimum of 0.5 ml; dried blood sample, at least 3 fully filled circles on filter paper collection device; oral fluid, sponge collection device should be rubbed along the gum until the device is thoroughly wet (this usually takes one minute). Adequate samples for serology are those collected within 28 days after rash onset.

Note: a proficient laboratory is one that is WHO accredited and/**or has an established quality assurance programme**

Surveillance indicators

Viral detection: Proportion of laboratory-confirmed chains of transmission with samples adequate for detecting measles or rubella virus collected and tested in an accredited laboratory (Target: ≥80%). The numerator is the number of chains of transmission for which adequate samples have been submitted for viral detection and the denominator is the number of chains of transmission identified.

Note: Where possible, samples should be collected from 5–10 cases early in a chain of transmission and every 2–3 months thereafter if transmission continues. For virus isolation, adequate throat or urine samples are those collected within 5 days after rash onset. For virus detection using molecular techniques, adequate throat samples are those collected up to 14 days after rash onset, and adequate oral fluid samples are those collected up to 21 days after rash onset.

Measles Elimination (Definition)

Measles elimination: the absence of endemic measles transmission in a defined geographical area (e.g., region or country) for ≥12 months in the presence of a well performing surveillance system.

麻しんに関する特定感染症予防指針の改正案の概要

○ 目標 :**平成27年度までに麻しんの排除を達成。世界保健機関による麻しんの排除の認定**を受け、その後も麻しんの排除の状態を維持する。
○ 届出・検査・相談体制の充実 :原則として**診断後24時間以内の臨床診断としての届出**、血清IgM抗体検査等の血清抗体価の測定の実施及び**ウイルス遺伝子検査用の検体の提出**を求め、必要時には**届出の取り下げ**を求めることとする。可能な限り、**国立感染症研究所及び地方衛生研究所において、遺伝子配列の解析を行う**。都道府県等は、麻しん対策の会議を設置した上で、地域における施策の進ちょく状況を評価する。必要に応じて、関係団体と連携して、麻しんの診断等に関する助言を行うアドバイザー制度の設置を検討する。
○ 第1期及び第2期の定期接種の接種率目標(95%以上)の達成・維持
○ 第3期及び第4期の定期接種の時限措置の終了と今後の新たな対策 :時限措置は当初の予定どおり平成24年度をもって終了し、今後は、麻しん患者が一例でも発生した場合に、積極的疫学調査の実施や、周囲の感受性者に対して予防接種を推奨することも含めた対応を強化することが必要である。
○ **国際貢献** :国際保健水準の向上に貢献するのみならず、海外で感染し、国内で発症する患者の発生を予防することにも寄与する。そのため、国は、世界保健機関等と連携しながら、国際的な麻しん対策の取組に積極的に関与する。
○ **排除認定会議の設置** :国は、麻しんが排除・維持されているかについて、専門家の意見を聴いた上で、厚生労働大臣に報告する排除認定会議を設置する。

厚生労働省 Ministry of Health, Labour and Welfare

22nd Meeting of the Technical Advisory Meeting (TAG) on Immunization and Vaccine Preventable Diseases (VPD) in the Western Pacific Region (WPR)
Manila, 25–27 June 2013

World Health Organization Western Pacific Region

Measles elimination

WPR has made remarkable achievements in eliminating measles with a >99% reduction in measles cases from 2003 to 2012.
Remaining challenges include the following:
(i) In 2013, measles remains endemic in three countries;
(ii) Several countries and areas have experienced endemic or imported outbreaks.
Rapid and effective strategies and actions are needed to detect and interrupt measles virus transmission through more sensitive surveillance and to close the remaining population immunity gaps across the age spectrum.

Recommendations

(1) The TAG urges counties to make sustained, intensified efforts to accelerate progress towards achieving and sustaining measles elimination, in accordance with the Regional Committee Resolution WPR/RC63.R5.
(2) The TAG encourages the WHO WPRO and member states to continue to use the Regional Verification Guidelines for Measles Elimination, and the roles of the RVC and NVC as an active means of monitoring progress and making adjustments where needed to improve performance.

22nd Meeting of the Technical Advisory Meeting (TAG) on Immunization and Vaccine Preventable Diseases (VPD) in the Western Pacific Region (WPR)
Manila, 25–27 June 2013

Rubella and CRS elimination

The TAG takes note of the following:

(i) the feasibility of rubella elimination and the platform of measles elimination provide an opportunity to work toward simultaneous rubella elimination;
(ii) the remaining high burden of rubella and CRS in the WPR, noting that during 2011–2013, at least 3 countries (Japan, Mongolia, and Viet Nam) have experienced large rubella outbreaks resulting in increased CRS cases;
(iii) the opportunity that as of 2013, six countries and areas have not yet introduced rubella vaccine into their routine immunization programmes.

World Health Organization Western Pacific Region

Recommendations

(1) The TAG recommends establishing a regional goal of eliminating rubella and CRS, with a target date to be determined, and including it in the Regional Framework for Implementation of GVAP in the WPR (2013–2020).
(2) The TAG requests all countries and areas to submit rubella case-based data on monthly basis to WPRO from January 2014.
(3) The TAG requests the WHO Secretariat to dialogue with countries to develop a consensus on the appropriate target year for rubella elimination in WPR, for consideration during the 2014 TAG meeting.
(4) The TAG recommends that Member States to develop joint action plans to synergize activities for elimination measles and rubella.
(5) All countries should consider selective vaccination of older age groups who are susceptible to rubella, based on local epidemiology.

World Health Organization Western Pacific Region

Western Pacific Region
Measles Elimination Field Guide (Draft Version as of 17 March 2013)

Strategies to eliminate measles

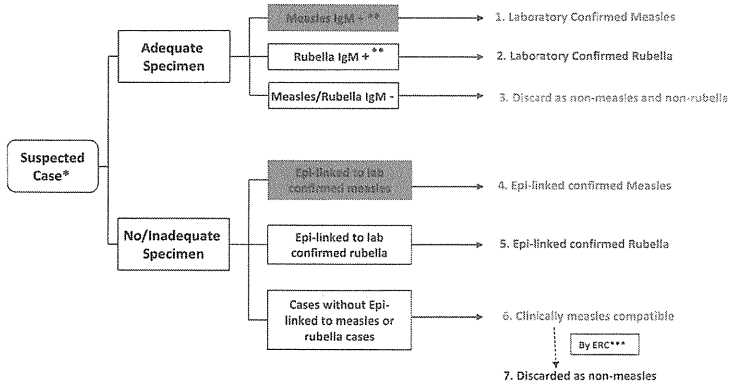
- Achieve and maintain high levels of population immunity
- Conduct high quality case-based measles surveillance
- Ensure high quality laboratory performance

Ensuring high quality laboratory contribution to surveillance through accredited laboratories that are able to conduct timely and accurate testing of samples to confirm or discard suspected measles cases and detect measles virus for genotyping and molecular analysis.

- Develop and maintain outbreak preparedness, and rapidly respond to measles outbreaks and manage measles cases.

Figure 1 Flow Chart for measles case classification

* Based on the national case definition for measles surveillance
** Includes other laboratory confirmatory tests
*** Expert Review Committee (ERC)



Confirmed measles cases: cases under classification 1 and 4
Non-measles & non-rubella cases: Total number of cases under classification 3 and 7
Epi-linked to laboratory confirmed = cases with a credible mode of transmission from a laboratory confirmed or another Epi-linked case 7 to 21 days prior to rash onset

Indicators of a well-performing surveillance system

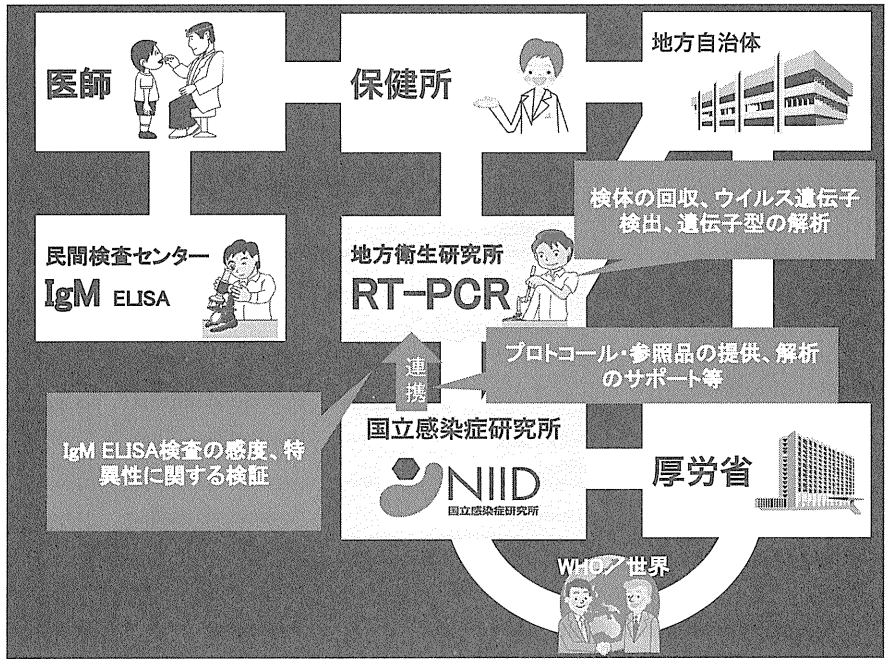
INDICATOR (selected)	DESCRIPTION	TARGET
Reporting rate of non-measles and non-rubella cases	Annual reporting rate at national level.	≥ 2 cases per 100,000 population
Representativeness of reporting	Proportion of 2nd level subnational units reporting ≥2 non-measles non-rubella cases per 100,000 population.	≥ 80%
Adequate investigation rate	Proportion of suspected measles cases with investigation initiated within 48 hours of notification, with collection of all 10 core variables.	≥ 80%
Adequate collection rate for blood specimens	Proportion of suspected measles cases (excluding epi-linked cases) with adequate specimen collection.	≥ 80%
Viral detection	Proportion of laboratory-confirmed chains of transmission with genotypic data available	≥ 80%

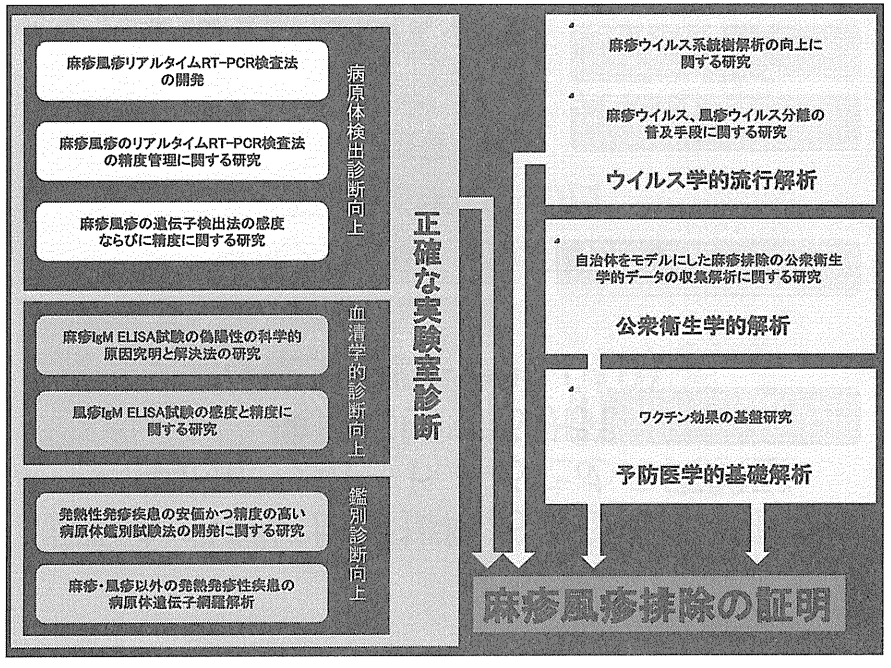
Western Pacific Region
Measles Elimination Field Guide (Draft Version as of 17 March 2013)

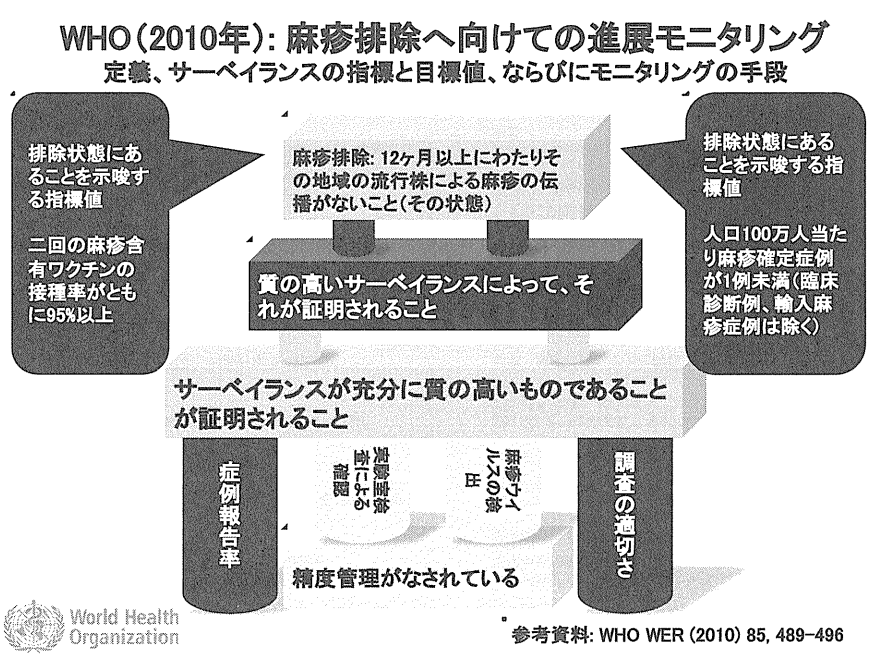
Outbreak response

Every laboratory confirmed measles case should be considered as an outbreak

- Outbreak investigation
- Outbreak response immunization
- Conduct routine immunization catch-up with high quality
- Conduct a high quality non-selective SIA







参考資料: WHO WER (2010) 85, 489–496