プライマリケアの強化

この本で触れた内容において、プライマリケアよりも重要なものは存在しない。もちろん、全ての改正は究極的には生活習慣病へのプライマリケア施設の改善へと繋がるのは言うまでもない。よって、Krug、Nigenda、とKnaulが再配向の提示によるプライマリヘルスケア制度への機会に焦点を当てているのは適正である。第四章で彼らが述べた通り、プライマリケア制度は課題解決のための理想的な設定を提供することができる。これには、生活習慣病の早期診断と予防、定期的な疾患管理、保健教育、統合的な疾患管理などが挙げられる。このようなサービスは、保険制度の慢性疾患におけるコストの削減に希望を与えることができる。早期診断とプライマリケア管理の向上は、コストの削減とともに、患者の健康状態向上にも貢献すると考えられる。しかし、国民皆保険と感染症対策の再配向無しには、どのような保険制度の再配向も効果的では無い。保健経営と初期予防に着眼し、平等性と全ての人々への近接性が重要になる。先進国での研究によると、正しい監督と約束無しには、プライマリケアは必ずしも公衆衛生の向上をもたらすことは無く、不平等性の拡大に繋がる可能性さえある。プライマリケアにおける保険制度の再配向をするにあたっては制限と利益への細心の注意をはらう必要がある。それはプライマリケアが強い政府、協調、良いシステム管理を無くして万能薬に成り得ないということだ。

新たな利害関係者の視点

持続可能性と長期的な実行可能性の分野において、生活習慣病はもっとも高度な挑戦となっている（第５章参照）。改革者は、国連目標の達成への努力のために、生活習慣病における医療財政の長期的な持続可能性に常に注意しておかなければならない。Savedoff et al.は国民皆保険の達成に向かっている国々の特徴をまとめた。それは、経済成長、人口統計、最新技術、ヘルスケアにおける政治、保

健における消費パターンなどに注目している。これらの要素は、国際保健分野での指導力の困難さや、多岐にわたる優先事項、さらには、世界的な経済不安などにより複雑化している。当然、これまでの寄贈者による保健に関連した国連開発目標達成は生活習慣病への取り組みにおいて理想的ではないと思われるため、新たな国際的保健協定、ビジネスモデルが、系統的な問題や、医療の質、医療財政に関する課題を解決するために必要かもしれない。その為には利害関係者が、政府間、二国間機関、多国間機関に留まらず、民間部門や市民社会や基金なども含むべきである。これにより、国際保健コミュニティーにおける役割は、単純な、金融資源の提供や事業の実施から、戦略の相談や助言や革新的アプローチの展開、そして、糾合する力の演習へと転換する。

伝染病から生活習慣病への病気の世界的な負担の変化は、保健制度の働きや、新たな課題の提示において、非常に象徴的な転換である。これらの課題は保険制度の働きや、幅広い部門の共同体と協力、または従事する能力を革命的に変える機会への挑戦である。本書は、保険制度の再配向における今後の問題や機会を突き止め、伝染病は減少していることから、新たな健康への脅威に集中するべきだと述べている。我々は再配向は長期的に見れば、徐々に不均等ながら決定的に発達することを確信している。

本書では、先進国と新興国の生活習慣病流行に対する新たな共通の取り組み探求に対する具体的な前進方法を提供している。国際保健コミュニティーがWHOの国民皆保険の新たなアジェンダの実施へと前進し、生活習慣病の流行により持続可能性の脅威の増大に答えようとする今こそ、具体的な政策目標と実施が新たな保険制度の骨組みの明確化のために不可欠である。私たちは、それらの進歩の為に以下の４つの政策が関与すると信じている：

1. *多部門にまたがるコミットメント：*
   社会が異なれば、非感染性疾患に対して効果的に対応するという目的のもと、ステークホルダーの関わり方は、異なるパター

ンを持っていて；変化に対する抵抗には、様々なパターンが存在し；政策立案者は、複数の部門にまたがって、改革するために最強のコミットメントとして、それらのステークホルダーと関わることを必要とする。進歩の異なる段階を持つ様々な社会のために、二大政党主義と草の根支援を確実にするために、バランスの取れた漸進的な目標を設定する必要がある。先進国と途上国において、効果的な多部門間の協力は、非感染性疾患の流行に対処するための新たな制度や政策のベース作りの達成に不可欠となる。

2. *実績のモニタリングにおける改善:*
業績のモニタリングは、何が上手くいき何が上手くいかないかを理解することだけでなく、将来、保健システムが直面するとされる病気の負担を理解すること、医療財政計画に対して非感染性疾患がもたらす価格と資源の問題を管理することが、必要不可欠である。[i] 非感染性疾患にとって、業績のモニタリングとは単に疾患の終末期の状態と関連する保健サービスの負担を測るのではなく、特にプライマリヘルスケアサービスなどの中級の保健機関における非感染性疾患の定期的な管理、患者の生活の質の維持、コスト制約などにおいて成功を示すことを意味する。（私的または公的を含む）医療財政機関は、一次および二次医療施設と薬局より得られるデータを合併させる必要性を促し、処方実践と定期的な疾病管理の両方が長期的医療費と病院の利用率にいかに影響するかを理解しなければならない。業績のモニタリングは、疾患の終末期の状態の観察にとどまらず、疾患管理プロセスの効率性とコストモニタリングをすることに軸足を変えていく必要がある。データが入手可能な場所では、大規模なデータセットやデータマイニングするための最新の手法を用い、入院患者を減らすための高度なアルゴリズムを用いること、そして薬をパーソナライズするための高性能の予測モデルが打ち出されるべきである。データ分析とその結果報告はそれ自体では十分ではなく、業績のモニタリングの成功には改

善されたフィードバックの過程が必要であり、それは継続的な品質改善の過程における医学界の参画と革新的な遠隔医療とソーシャルマーケティングプロセスがあることの両方によって、個人やステークホルダーに対して、予防医学に関する調査結果を保健システムの外に報告を押し出される。このような変化は、未だデータ収集が発展途上にあり報告システムが脆弱あるいは断片的である発展途上国の保健システムにとって、とりわけ困難となる。

3. *非伝統的なセクターの医療との関わり:*
セクター間協調は、伝統的に保健セクターの境界外とされる機関や組織の関与を要求する： 企業、地域団体、宗教団体、そして労働組合は、セクター間協調において役割を果たすことができ、保健機関との独自のパートナーシップを構築することができる。 これらのパートナーシップは、ドナーとしての伝統的な役割を持ってきた保健分野でないセクターのアクターをより深いレベルで従事させる必要がある：彼らは保健に関するアジェンダの設定と実施を行い、積極的な役割を担うことができるようにしなければならない。グローバルヘルスコミュニティーは、これらの非伝統的なアクターを関与させるために、伝統的な保健セクターの外にあるイニシアチブを招集し調整すること、非感染性疾患と国民皆保険制度における議題に関する目標を統一させること、においてより強力な役割を担っていかなければならない。非感染性疾患の危険因子に対して手がけるグローバルヘルスのプログラムは、労働慣習、消費生活、交通、レジャー活動をターゲットとして、狭い保健の枠組みの外で運用される必要がある；これらの領域のすべてにおける革新的なプログラムは、これらのおかれる分野での主要なステークホルダーの積極的な協力が必要になります。それらステークホルダーの関与は、新しくコミュニティを越えた、そして徐々に国家を越えたパートナーシップを不可欠とする。

4. *プライマリーヘルスケアにおける近代化*:
これらの改革のすべてにとっても最も重要な機関は、プライマリーヘルスケアに関わる機関である。プライマリーヘルスケアは、非感染性疾患の予防と管理に最適な保健セクターの層となっており、また、患者の幸福度を上げ、コストの削減が可能となる、革新的かつ学際的なシステムのための最適なセッティングなのである（第4章を参照）。しかし、一部の国では、まだプライマリーヘルスケアの枠組みの開発の発展途上である、あるいは感染症にのみ焦点を当てたプライマリーヘルスケアのシステムを保持している状況である。プライマリーヘルスケアシステムは、患者のニーズに応えていることを確実にし、公衆衛生プログラムにおいて強力な役割を果たし、NCDの適切な管理のための資源を有し、かつ非感染性疾患の危険因子を対象とすることを可能にするために、近代化されなければならない。保健システムレベルにおける意味としては、家庭医と看護師が予防医療サービスや公衆衛生上の介入を提供するための時間と機会を確保できるように、疾病の早期診断のためのサポートを強化し、決済システムの構造化をはかることを指す；これによって、単に治療の時点での病気の症状に焦点を当てるのではなく、調整された治療プランを開発することを可能にする。前章で示したように、NCDにおけるプライマリーヘルスケアの管理に成功したモデルが幅広く存在し、最も効果的かつ適切なプライマリーヘルスケアのシステムが整っていることを保証するために、それらは国や地方の保健機関によってそのモデルを活用していくことができる。

ここで紹介するNCDの危機に関する分析は、多部門やセクター間の協力、良い統治、既存の知識の応用におけるイノベーション、そしてNCDへの挑戦を成功の鍵となる、改革されたプライマリーヘルスケアの重要性に、公正に焦点を当てている。我々は、HIV/エイズなど、既存の健康問題に対する過去の成功例から多くの教訓を得てきた。今となってグローバルヘルスコミュニティは、発展途上国

で直面した新たな問題に対し、これらの教訓を活かしていく必要がある。先に待ち受けている改革は、政策と実践において大きな変化を要するものとなる。より広いコミュニティーからの新しいステークホルダーたちは、注目を受け、関わりを持っていかなければならなく、それにはパートナーシップを構築し、維持するための新たな方法を必要とする。医療政策立案者は、これらの新たなパートナーシップ、イノベーション、およびコミュニティーへの関わりに適応することができた場合には、NCD の挑戦を、社会のすべて人へ病気の軽減を提供するための公平性、効率性、保健システムの応答性を改善する機会に変換していくことも可能にする。

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Cash-transfer programmes in developing countries

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In *The Lancet*, Laura Robertson and colleagues present research that adds to the impressive record of cash-transfer programmes.[1] In a cluster-randomised trial undertaken in difficult circumstances in Zimbabwe, Robertson and colleagues[1] show that a conditional cash transfer (CCT) programme improved the proportion of children aged 6–12 years who attend school regularly by 7·6% (95% CI 1·2–14·1) and that of children aged 0–4 years with birth certificates by 16·4% (7·8–25·0) compared with a control group. An unconditional cash transfer (UCT) programme also increased the proportion of children aged 6–12 years who attend school regularly by 7·2% (0·8–13·7), but it did not have a significant effect on birth registration (increase of 1·5%, 95% CI −7·1 to 10·1). Neither programme had a significant effect on the proportion of children aged 0–4 years with up-to-date vaccinations: 1·8% (−5·0 to 8·7) more children in the CCT group and 3·1% (−3·8 to 9·9) more in the UCT group than in the control group had complete records.[1]

Robertson and colleagues[1] have also provided a rare head-to-head comparison of UCT and CCT programmes, enabling comparison of their health and welfare effects. As with previous programmes,[2] households in the CCT group in areas where the intervention was most effective received substantial community support. The results confirm the strong role that cash-transfer programmes—both UCT and CCT—can have in poverty alleviation, but questions remain as to their effectiveness in improvement of health outcomes.[2,3] How then should such programmes be implemented, and what more needs to be known to realise their potential health benefits?

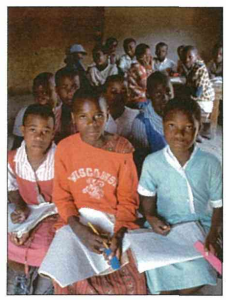
These programmes induce behavioural change in the target population through two main pathways: lowering of financial barriers to health services and raising awareness of beneficial behaviour. UCT programmes work best when supported by supply-side investment and health-system expansion. CCT programmes work best when their conditions are aligned with broad health development goals;[4,5] they might have little effect where health services have poor coverage, are high cost without risk-pooling mechanisms, or raise non-financial barriers to access.[6] CCTs also have many information-system and administrative requirements,[7] and can necessitate governance reforms and improvements in information infrastructure simultaneous with their implementation. Therefore, many low-income countries could prefer to use UCT programmes for social welfare despite the weaker evidence for their health benefits.[8] If so, other forms of

health investment might be necessary at the same time as the UCT programme to produce real health gains.

Timeframe and scope are additional considerations in design of cash-transfer programmes. With a robust level of service provision, evidence indicates that economic incentives are more effective at ensuring one-off, short-term behaviour change or processes—as with birth registration in Robertson and colleagues' study—than distal, long-term outcomes, such as mortality or morbidity reduction. The scope of cash-transfer programmes can also be highly variable in terms of the nature of supplementary interventions, level of remuneration, and strictness of conditions. Further research assessing the relation between timeframe, conditionality, and scope is necessary to maximise their effects.[9]

Additionally, cash-transfer programmes can be expensive, and, so far, none have been subject to cost-effectiveness analysis.[10] Whether they are the best use of money in resource-constrained settings is unknown, especially where they are being implemented on top of broad supply-side investments. In view of the potentially high additional cost of administrative requirements for CCT programmes compared with UCT or broad-based health-system strengthening, cost-effectiveness and ethical factors need to be taken into account.

The policy framework for these programmes is clear: their implementation should coincide with strengthening of health infrastructure, information systems, and governance to ensure effective means testing and programme delivery. The research agenda is also clear: programme assessment should include detailed cost-effectiveness studies and research that gives a deep, qualitative understanding of how and why cash transfers affect health-seeking behaviour. Understanding of how households actually expend the received cash or respond to disbursement conditions is important for design of cash-transfer programmes to better affect health outcomes. Such research could further shed light on claims that CCT programmes are a so-called magic bullet.[11] The challenge for the global health community is to support countries to ensure that these programmes are used in the right settings and to address the right problems, and are subject to the same measured and evidence-based judgments as every other intervention.



Gideon Mendel/Corbis

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We declare that we have no conflicts of interest.

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Polygenic familial hypercholesterolaemia: does it matter?

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Familial hypercholesterolaemia affects at least one in 500 people, or more than 12 million people worldwide.[1] Raised low-density lipoprotein cholesterol (LDL-C) from birth is caused by mutations in the LDL receptor gene (*LDLR*), of which over 1200 mutations have been described,[2] and less frequently by mutations in $APOB_{100}$ or *PCSK9*. If raised LDL-C is untreated, or inadequately treated, familial hypercholesterolaemia results in early and recurrent cardiovascular disease.[3]

Since the first description nearly 75 years ago,[4] diagnosis and treatment have advanced, now based on a combination of LDL-C concentrations, clinical findings, and personal and family history.[5] Drug therapy for LDL-C, often pioneered in familial hypercholesterolaemia

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Simple steps to equity in child survival

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Abstract

Although the number of child deaths has declined globally over the past 20 years, many countries still lag behind their millennium development goal targets, and inequity in child health remains a pernicious problem both between and within countries. Breastfeeding is a key intervention to reduce child mortality, and in an article published in *BMC Medicine,* Roberts and colleagues have shown that breastfeeding interventions can have a significant role in reducing inequity in child health. With the proper attention paid to overcoming the barriers to scaling up breastfeeding interventions, deployment of effective interventions in health facilities and the community, and improvements in support for breastfeeding interventions across society, many countries that are struggling to meet their millennium development goals could make significant gains in child survival and inequity.

Please see related research: http://www.biomedcentral.com/1741-7015/11/254/abstract.

Keywords: Breastfeeding, Child mortality, Health inequity, Interventions, Millennium development goals

Background

Significant progress has been made towards achieving Millennium Development Goal 4 (MDG 4), which pertains to reducing child mortality, but much more is still to be done [1]. Since the turn of the millennium the number of child deaths has declined significantly, from an estimated 11.6 million in 2000 to 7.2 million in 2010 [2]. However, greater efforts are required if the world is to meet the millennium development goals [2], and despite recognition of the problem, inequity in child health remains a persistent and galling issue holding back progress [3]. Although the importance of within-country inequalities has been recognized, they are difficult to eliminate. Interventions to improve accessibility and coverage of health services are often taken advantage of first and most successfully by the wealthiest segments of society [4]. Further, interventions such as cash transfers that target welfare and poverty directly may not have observable health benefits [5].

It is in this context that Roberts *et al.* show the potential for breastfeeding interventions to reduce inequity in child mortality [6]. Roberts and colleagues use available data to estimate the changes in prevalence of exclusive and partial breastfeeding in 137 developing countries, separately by wealth quintile, and show that gains in breastfeeding coverage are equal across wealth quintiles. Breastfeeding does not rely on health infrastructure, is not taken up preferentially by the wealthy, and helps to prevent diseases such as pneumonia that have higher prevalence in poorer communities [7]. Therefore, breastfeeding interventions have greater potential than others to reverse major inequalities in child mortality [8]. Breastfeeding also plays an important role in addressing both the short-term and long-term effects of malnutrition, and can have greater benefits in the poorest communities [9].

For the benefits of breastfeeding to be realized, however, rates of breastfeeding need to be high in all countries, and Roberts *et al.* present a mixed picture of success in this regard. Some countries have made remarkable progress in scaling up breastfeeding as a child health intervention since 1990: in Malawi, for example, rates of exclusive breastfeeding in the first 5 months of life have increased from 5.0% in 1990 to 49.7% in 2010, and over this time period the rates of predominant breastfeeding in some countries have doubled from a low base. However, many countries, often those with the highest rates of child mortality, have regressed during this time. In some countries, concerns about mother-to-child transmission of HIV are likely to contribute to low rates of breastfeeding [10], despite strong World Health Organization (WHO) guidelines on HIV and infant feeding practices [11]. In these countries, better understanding of the competing risks of suboptimal breastfeeding and HIV/AIDS, better adherence to WHO guidelines, and education of mothers and health

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providers, are essential to improve breastfeeding rates in future. However, some countries with low HIV prevalence such as Afghanistan, Guyana and Indonesia have shown a reduction in exclusive breastfeeding rates over the duration of the study [6]. Understanding the barriers to breastfeeding in these countries, and identifying interventions that will work, is crucial to reducing child mortality and health inequity.

What is to be done to encourage breastfeeding in these countries? What interventions are complementary to and support breastfeeding, and what intersectoral gains need to be made to support breastfeeding interventions in those countries that are furthest from achieving MDG 4?

Interventions to support breastfeeding

The efficacy of basic interventions to promote breastfeeding is well established [12], and the benefits of an ambitious scale up of breastfeeding in developing nations potentially substantial [13]. Breastfeeding interventions can also be implemented without substantial investment in facilities and medical technology or other medical infrastructure, and offer the potential for a cheap, high coverage mechanism to elevate the health of all children, without leaving the poorest behind. However, effective interventions often involve peer education, individual counseling and prenatal and postnatal support. These are interventions that depend on the availability of a workforce that is often lacking in countries most in need of interventions to scale up breastfeeding. Furthermore, these interventions can lose their efficacy as they are scaled up and incorporated into standard health system structures [14]. As is the case with most effective community health interventions, counseling interventions administered by community health workers require sufficient remuneration, training and workplace support [15]. Such conditions do not necessarily exist in low-income countries where prenatal counseling and support is most needed, and will need to be established early in the process of expanding both breastfeeding-specific and broader maternal and child health (MCH) interventions. Without careful attention to the levels of payment, training and professional support that community health workers receive, it will be difficult to build a sustainable intervention capable of making the large-scale, prolonged and broad-based changes to breastfeeding practice necessary to achieve MDG 4.

Beyond the health sector

Breastfeeding is also a nutrition intervention with significant developmental and welfare benefits. The success of breastfeeding programs is also tied to the quality of maternal nutrition, and to the level of social support for breastfeeding. Roberts *et al.* rightly indicate the role of legislative changes and the media in encouraging and supporting breastfeeding, and this shows the important role of intersectoral collaboration in building an environment supportive of the full benefits of breastfeeding. Legislative support for public breastfeeding, family friendly workplace policies, strict standards on the content and advertising of baby foods for complementary feeding should become commonplace and acceptable community-level interventions in low-income nations.

Because breastfeeding does not rely on technology investment or extensive health infrastructure, it is also amenable to community based and grassroots initiatives to improve uptake [16], and these initiatives should be implemented and supported wherever possible. These complementary efforts have been shown to be effective at improving breastfeeding adherence in low-income nations [17], and are particularly important in settings where facility-based births are the minority [18]: typically, settings where exclusive breastfeeding is likely to have the largest effect on child mortality and inequality in infant health and development outcomes. In communities where most births occur in the home, it is not enough to have child friendly hospitals; instead, we need intersectoral development programs to build child friendly communities.

Conclusions

Roberts *et al.* have identified the powerful equity benefits of scaling up breastfeeding, and quantified its significant contribution to preventing illness and mortality in low-income and middle-income countries. With this knowledge, we can better prioritize funding and system organization both for improving child health and for reducing inequity in illness and mortality in some of the poorest countries in the world. Nonetheless, challenges to scaling up breastfeeding remain. Only through careful attention to what is known to be effective and cost-effective, coupled with strategic use of multisectoral agents and cooperation across society, can we realize the large benefits of breastfeeding's unique contribution to reducing the burden of disease and inequity in disease distribution in low-income and middle-income countries. With the deadline for the MDGs approaching and many countries still lagging on the key indicators of child health, now is the time to redouble efforts to scale up this cheap, reliable and equitable intervention, and to achieve the promise of better and more equitable health made in 2000.

Competing interests

The authors declare that they have no competing interests.

Authors' contributions

Both authors contributed to conception of the article. SG drafted the article. Both authors were involved in editing and revision of the manuscript and both agreed to its publication.

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