Abbreviations and Acronyms

3M Study = Morbidity of Myocardial Infarction Multicenter Study in Japan

BP = Blood pressure

CAD = Coronary artery disease

CVD = Cardiovascular disease

DM = Diabetes mellitus

HDL = High-density lipoprotein

HIPOP-OHP = High-risk and Population strategies for occupational Health Promotion Study

HR = Hazard ratio

HTN = Hypertension

JMS = Jichi Medical School

LDL = Low-density lipoprotein

MetS = Metabolic syndrome

MI = Myocardial infarction

NCDs = Non-communicable diseases

PA = Physical activity

WHO-MONICA = World Health Organization-Multinational MONItoring of trends and determinants in CArdiovascular disease

hypertension (HTN) and diabetes mellitus (DM) is increasing. Since 1990, the annual medical examination has included items for the early detection of NCDs.

Additionally, since 2001, all workers are eligible to receive a "worker's-accident secondary medical examination" following the routine health check-up through the workers' accident compensation insurance system. The purpose of this examination is to facilitate early detection of NCDs and related complications, particularly, cardiovascular disease (CVD). Several factors led to the addition of this secondary medical examination. First, it was recognized that the number of CVD cases triggered by excessive workload was increasing. Second, the majority of these cases tended to harbour underlying subclinical atherosclerosis and/or related risk factors, but neglected to seek intervention; thus, these high-risk workers may be very fragile when overworked. Third, because most atherosclerotic diseases are caused by inappropriate lifestyle habits, it is important to identify early risk factors for each individual in order to provide appropriate guidance and implement suitable measures that can improve lifestyle. Intervening at an early stage may also prevent symptomatic atherosclerotic diseases and reduce '*Karoushi*,' death due to overwork.

The "worker's-accident secondary medical examination" consists of the following: a) fasting blood tests, including serum high density lipoprotein (HDL) cholesterol, low-density lipoprotein (LDL) cholesterol, triglyceride, blood glucose, and haemoglobin A1c; b) exercise electrocardiography or echocardiography; c) carotid ultrasonography; and d) tests for microalbuminuria. Based upon the results of the secondary examination, workers who are deemed to be high-risk due to angina on exertion, the presence of CVD, DM, or other conditions, are immediately referred to an appropriate hospital for further management. Workers who are not high-risk receive "A Special health guidance" from a doctor or public health nurse in order to improve their lifestyle.

The "Industrial Safety and Health Law"[2] mandates that companies employing at least 50 workers must assign an occupational physician who meets at least one of the requirements specified in Article 14 of the "Ordinance on Industrial Safety and Health."[3] There are approximately 83,000 occupational physicians in Japan.[4] One of the most important jobs of the occupational physician is primary prevention of NCDs in the worksite. On the basis of the medical examination, the occupational physician can order workers with abnormal findings to be re-examined or refer them for consultation with other medical specialists. Workers seeking consultation from specialists can readily access any medical institution through the '*Kaihoken*' system, health insurance for all, which was established in Japan in 1961. '*Kaihoken*' ensures free access to all types of health services with a self-pay rate of 30% applied across all citizens in Japan. This system is also credited with playing an important role in reducing stroke mortality in Japan after the mid-1960s.[5]

Prevalence of CVD risk factors and incidence of coronary artery disease in Japanese workers

With regard to CVD subtypes, the incidence of coronary artery disease (CAD) is much lower in Japan than that observed in Western countries[6]; however, a high-fat diet,[7] and reduced physical activity (PA) are anticipated to increase the incidence of CAD. In fact, both the total cholesterol concentration and body weight of the Japanese population have continued to rise over the past 20 years with the prevalence of DM also increasing.[8]

Although many previous cohort studies have investigated risk factors for CVD in the Japanese general population,[9,10] well-designed studies on CVD risk factors in Japanese workers are scarce. Among the few studies, the Morbidity of Myocardial Infarction Multicenter Study in Japan (3M Study)[11–13] investigated the morbidity from acute myocardial infarction (MI) and risk factors for MI in Japanese workers. Employing definitions for MI and CAD death established by the World Health Organization-Multinational MONItoring of trends and determinants in CArdiovascular disease (WHO-MONICA) Project, the 3M Study identified a total of 297 fatal and nonfatal CVD events among 133,099 workers (109,550 men, 23,549 women) from 41 workplaces during the period from April 1994 to March 1997, and 257,440 workers (207,310 men, 50,130 women) from 76 workplaces from April 1997 to March 2000. Full-time occupational physicians provided care, and most workplaces participating in the 3M Study represented major companies in Japan. Up to 97.8% of workers aged 40 or older in the study worksites participated in annual health checkups. The age-standardized annual event rate of MI for men aged 35–64 years was 40.2 per 100,000 persons.[11] Among the male workers, the crude annual event rates per 100,000 persons were 0 for those in their 20's, 2.5 for ages 30–34, 7.6 for ages 35–39, 17.7 for ages 40–44, 52.4 for ages 45–49, 67.7 for ages 50–54, and 71.9 for ages 55–59. These figures were significantly lower compared with those previously reported in Japanese coeval community dwellers.

The reduced frequency of MI events among the workers in this study may be attributable to preventive interventions as

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well as the early treatment of CAD risk factors. In the 3M Study, 12% of men and 5.6% of women had HTN [blood pressure (BP) ≥140/90 mmHg]; 26.5% and 25.8%, respectively, had hypercholesterolemia (total cholesterol ≥220 mg/dl); and 11.4% and 4.0%, respectively, had abnormal glucose tolerance (fasting blood glucose ≥110 mg/dl). Body mass index ≥26.4 (equivalent to the obesity index +20%) was reported for 11.5% of men and 11.7% of women; 55% of men in their 40's and 48.7% of those in their 50's were smokers compared with 24.0% and 16.3% for women in these age categories, respectively.

The 3M Study was designed as a nested case–control study.[12] For each case of MI entered into the study between 1997 and 2000, two age-matched controls were randomly selected from participants in risk factor surveys who had no history of MI. A total of 723 male employees (241 cases and 482 controls) aged 35–65 years were enrolled. Compared to controls, the subjects had significantly higher serum LDL-cholesterol and triglyceride levels, and lower HDL-cholesterol levels. Using conditional logistic regression, predictive models were also constructed to evaluate the risk of MI on the basis of CAD risk factors.[13] The multivariable conditional odds ratios (95% confidence intervals) for MI were 2.02 (1.29–3.16) for high BP, 2.33 (1.51–3.59) for high LDL-cholesterol, 4.16 (2.36–7.33) for low HDL-cholesterol, 1.49 (0.94–2.35) for high triglycerides, 1.46 (0.89–2.39) for high glucose, and 2.95 (1.90–4.59) for current smoking. The predictive value for MI was markedly reduced after excluding high LDL-cholesterol (change in predictive value, −3.4%), and further exclusions of low HDL-cholesterol (−7.1%) and current smoking (−16.4%). Both high LDL-cholesterol and low HDL-cholesterol levels were independently associated with an increased risk of MI. Additionally, current smoking was highly predictive of MI among middle-aged men, which was a specific feature of Japanese male workers.

A new trial for further wellness: population strategy

Lifestyle modifications such as changes in diet and increased physical activity are important for controlling the risk of developing CVD. Interventional approaches to improving lifestyle may consist of both high-risk and population strategies.[14,15] The high-risk strategy identifies and reaches out to individuals who are more vulnerable for developing diseases. Most medical services including health checkups as previously described are categorized as high-risk strategies. While the high-risk strategy can be readily understood and strongly motivates individuals to modify their behaviour, it may not affect the majority who fail to meet the criteria for screening high-risk individuals. Therefore, a high-risk strategy may not significantly decrease the overall CVD risk in the population. To effectively reduce the prevalence of a specific disease in the broader population, it is necessary to lower the average risk associated with each risk factor in the population, even if the reduction is minimal. A population strategy, which is more moderate, but universally applied to all without screening, may be effective in reducing the risk of disease in the entire population.

When implementing a population strategy, it is important to first evaluate the working environment and the employees' lifestyles, and then, implement appropriate interventions. Table 1 presents sample components of a population strategy to control risk factors for CVD. Lifestyle improvements such as dietary modifications (e.g., reducing salt intake or alcohol consumption), increasing PA, and smoking cessation can reduce or prevent CVD risk factors such as HTN, dyslipidemia, and DM. Therefore, it is essential to include initiatives that target the three factors, namely, nutrition, physical activity, and smoking when implementing the population strategy to control CVD risk factors.

In 1998, we initiated a large intervention trial, the High-risk and Population strategies for occupational Health Promotion Study (HIPOP-OHP Study). The HIPOP-OHP Study incorporated a program aimed at reducing the development of CVD risk factors in the workplace. Details of this study have been published elsewhere.[16–20] Briefly, we recruited 12 companies in Japan, each of which had 500–1,000 employees. The employees at these companies, including two non-factory companies and 10 factories, were assigned to either an intervention or control group. In the intervention group, the health-related environment was improved using a population strategy and individual interventions (high-risk strategy). Interventions in the population strategy (Table 1) were pragmatically introduced. In the control group, only individual intervention teaching material was provided. The baseline survey was conducted between 1999 and 2000, and the intervention program was implemented between 2000 and 2004. In the intervention group, information on diseases and lifestyle modification for all was provided. Posters and stand-type Point of Purchase advertising menus were placed on tables in the dining rooms at the workplaces.[21] In addition, health-related events were organized through internal websites. To improve nutrition, the contents of meals served in the workplace dining rooms and box lunches delivered by caterers were evaluated, followed by recommendations for sodium and potassium intake, nutritional balance, and fat caloric intake. For PA, walking paths were constructed or walking maps were prepared. An "Active Point Campaign" using pedometers was arranged twice a year to promote individual and interdepartmental competition and increase PA among workers. To reduce smoking, designated smoking areas were established based on the advice of the specialist team. In addition, smoking cessation campaigns were conducted. These interventions were performed in 6-month cycles.

In this study, the absolute (percent) changes in HDL-cholesterol were 2.7 mg/dl (4.8%) and −0.6 mg/dl (−1.0%) in the intervention and control groups, respectively.[22] Differences between the two groups with regard to changes in serum HDL-cholesterol levels were highly significant. Heightened awareness of the benefits of exercise achieved through environmental rearrangement and health promotion campaigns, particularly those targeting walking, may have contributed to favourable changes in serum HDL-cholesterol levels. The smoking cessation rate, defined as abstinence

Table 1 – Components of a worksite population strategy for controlling the cardiovascular disease.

Nutrition	Physical Activity	Smoking
1. Presenting information for a healthy diet	1. Presenting information for physical activity	1. Presenting information for smoking cessation
a. Place stand-type mini-poster presentation on the table weekly: 'Point of Purchase advertising menu (POP menu)'	c. Place stand-type mini-poster presentation on the table weekly: 'Point of Purchase advertising menu (POP menu)'	d. Place stand-type mini-poster presentation on the table weekly: 'Point of Purchase advertising menu (POP menu)'
b. Wall posters	a. Wall posters	a. Wall posters
c. Website	b. Website	b. Website
d. Intra-workplace newspaper	c. Intra-workplace newspaper	c. Intra-workplace newspaper
2. Interventions for the workplace dining room	2. Campaign for increasing physical activity	2. Antismoking campaign
a. Assess salt concentration in miso soup	a. Self-recorded diary for physical activity 'active point campaign'	a. Recruit for smoking cessation program, smoking cessation program done by clerical staff 'without nicotine replacement' 'with nicotine gum' smoking cessation program done by medical staff 'with nicotine patch'
b. Change soy sauce servings	b. Lecture on 'active walking'	b. Lecture on 'stop smoking'
c. Use low-calorie salad dressing	c. Lecture on 'stretching'	c. Lecture on 'promotion of smoking area designation' for managerial workers
d. Serve healthy menus	d. Sport events in the workplaces	3. Advise reconstruction to promote designated smoking area
e. Disclose nutritional balance of menus	3. Installation of areas or tools for walking	4. Inspect designation of smoking areas
3. Inspect total sales of beverages	a. Construct walking paths in the workplaces	
a. Grocery store in the workplace	b. Create maps for walking in or near the workplaces	
b. Vending machine in the workplace	c. Distribute pedometers to all workers	
4. Interventions for the household		
a. Provide health education for the person who cooks		
b. Present healthy menus for the household		

from smoking for the preceding six months or longer, was assessed at 36 months after the baseline survey using a self-administered questionnaire; this rate was significantly higher in the intervention than control group (12.1%, vs. 9.4%, respectively).[23] The study also suggested that designating a smoking area may be effective for preventing DM;[24] this measure can be implemented at workplaces where the prevalence of smoking is high. In the real-world setting, however, recent budgetary constraints may prohibit generalization of these health-promoting activities across all occupational settings in Japan.

Residual problems and future direction for solutions

As previously discussed, several health laws and programs have been demonstrated to be effective in preventing CVD among workers in Japan. In April 2008, the Ministry of Health, Labour and Welfare implemented a new strategy for preventing CVD not only in community dwellers but also in worksites in Japan.[25] Under this new system, measures for preventing CVD and diabetes such as screening for the metabolic syndrome (MetS) and subsequent lifestyle modification are available to all citizens (Table 2). Measurement of waist circumference was introduced as an additional item in health checkups. Cardiovascular risk factors are often clustered with abdominal fat accumulation, which has resulted in a high incidence of CVD.[26,27] Previous cohort studies in Japan have suggested that CVD risk factor clustering was strongly associated with CVD,[27–29] which has also been correlated with increased medical expenditures.[30] We believe it is feasible to focus on MetS in the worksite, as demonstrated in a recent urban cohort study which showed that applying a standard MetS definition is useful for detecting high-risk individuals, particularly in the middle-aged population, but not in the elderly.[31] MetS screening rates over the past five years, however, has been very low (i.e. less than 35%), especially among small scale companies, self-employed individuals, farmers, fishermen, and other similar workers.

The health status of workers in small companies is relatively poor compared to that of workers in large companies. In 1986, Miyake[32] found that the proportion of persons who checked their BP annually decreased commensurately with the size of companies participating in the survey. In 1992, Hirai et al[33] examined the relationship between HTN and company size and found that in a total population of

Table 2 – Current check-items for annual health check in worksite.*

1. Investigation of anamnesis and work history
2. Examination for the presence of subjective and objective symptoms
3. Examination of height, weight, abdominal circumference, eyesight, and hearing
4. Thoracic X-ray examination and sputum examination
5. Blood pressure measurement
6. Anemia examination (hemoglobin, erythrocyte count)
7. Hepatic function (AST, ALT, γ-GTP)
8. Blood lipid levels (LDL cholesterol, HDL cholesterol, triglyceride)
9. Blood sugar level
10. Examination for the presence or absence of sugar and protein in the urine
11. Electrocardiography

Abbreviations: ALT, alanine transaminase; AST, aspartate aminotransferase; γ-GTP, gamma glutamyl transpeptidase; HDL, high-density lipoprotein; LDL, low-density lipoprotein.

* Prescribed by Article 44 of the "Ordinance on Industrial Safety and Health" since 2008 when nationwide screening for metabolic syndrome was introduced.

89,299 men, the prevalence of HTN was significantly higher in those working in small-scale companies compared to that in workers from large-scale companies, irrespective of business type. Similarly, the prevalence of HTN was significantly higher in women employed in small-scale companies for some categories of business. Yamataki et al[34] also surveyed 6,480 workers of a Japanese steel company and various subcontractors who received health checkups in 2003 and noted a significant trend for a higher prevalence of DM and HTN in smaller companies. A large study[35] of 9,833 companies employing a total of 436,729 workers showed that the age-adjusted percentages of male workers in small scale companies (i.e. ≤49 employees) with HTN, impaired glucose tolerance, and obesity were 8.5, 5.0 and 3.5%, respectively, which were higher than the respective percentages in companies with ≥50 employees. These findings may be explained by the "Industrial Safety and Health Law," which requires an occupational physician to be assigned to companies with at least 50 workers.

Above-mentioned studies have also suggested that socioeconomic status, including educational level, and control of CVD risk factors may be poor in workers in small-scale companies. A demographic finding in modern society is the inverse association between socioeconomic status and mortality.[36,37] The Jichi Medical School (JMS) cohort investigated mortality risks in relation to occupational category and position among Japanese workers.[38] A total of 6,929 Japanese workers aged 40 to 65 years (3,333 men and 3,596 women) from 12 rural communities across Japan were followed over 10 years. Among the men employed in blue-collar jobs, all-cause mortality was increased compared with that in white-collar workers [hazard ratio (HR): 1.64, 95% CI 1.10–2.45]. Men in blue-collar jobs also showed a tendency for a higher risk of mortality associated with CVD compared with those in white-collar jobs, but the difference was not significant (HR: 1.84, 95% CI 0.69–4.89). On the other hand, when stratified by occupational category, non-managerial women in blue-collar jobs exhibited a reduced risk for CVD mortality risk compared with managerial women (HR: 0.15, 95% CI 0.03–0.81). However, non-managerial women in white-collar jobs had a non-significant increase in the risk for CVD mortality compared with managerial women (HR: 2.34, 95% CI 0.25–21.87). Based on these findings, the authors concluded that socioeconomic disparity, as defined by occupational category, was related to the risk of all-cause mortality among Japanese men. Further, a potential interaction may exist between occupational category and position with regard to CVD mortality among Japanese women.

The Industrial Safety and Health Law, which is applicable to all companies irrespective of size, mandates employers to offer health examinations to employees. Whereas employers failing to comply are subject to criminal punishment, there is no criminal punishment for non-compliant employees. Furthermore, it is difficult for the Labour Standards Inspection Office to identify employers at each worksite who violate the law and ordinance due to a shortage of officers. A practical solution is to raise the knowledge level of employees in small companies with regard to health and to inform them of their right to receive healthcare services.

The Ministry of Health, Labour and Welfare promotes the "National Health Promotion Movement in the 21st Century (Health Japan 21)," which aims to reduce the number of premature deaths, prolong healthy years of life, and improve people's quality of life since 2000.[39] In 2013, this campaign was updated as 'Health Japan 21 (the second term).' In this program, primary and secondary prevention of NCDs is defined as a major goal, which ultimately aims to reduce gaps in health status among the Japanese population. Concerning CVD, one goal is to decrease the age-adjusted mortality due to stroke and CAD; this may be successfully accomplished by controlling major risk factors, including HTN, dyslipidemia, DM, and smoking. A 4-mmHg reduction in the mean systolic BP of the total population may be considered a quality indicator for controlling HTN, which plays a key role in reducing CVD. This decrease is expected to be accomplished by reducing salt intake, obesity, and high-risk drinking while increasing the intake of vegetables and fruits, PA (by increasing the daily number of steps) and medical treatment of individuals with HTN. Except for medication, most methods for decreasing BP consist of lifestyle modifications. As noted, some high-risk individuals may receive health guidance through MetS screening; however, it is more difficult to manage the majority of the population without MetS.

Therefore, a 'population strategy,' such as that pioneered by Geoffrey Rose[14,15] and presented here, offers a potential approach to overcoming the challenges arising from the low rates of MetS screening and poor health of workers in small-scale companies. Further, this strategy serves to promote and support the goals of Health Japan 21. Clearly, the effectiveness of activities conducted in a high-risk strategy, such as providing health guidance to improve MetS, may also be strengthened and broadly supported by a population strategy. Therefore, implementing a combination of high-risk and population strategies in the workplace may be effective in improving lifestyles and controlling CVD risk factors in the

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working population. However, although practical methods, such as MetS screening, for a high-risk strategy exist, pragmatic approaches to a population strategy are still under development in Japan.

Statement of Conflict of Interest

All authors declare that there are no conflicts of interest.

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基調シンポジウム
「トータル・ヘルス・ケアとしての人間ドック～人間ドックの入口から出口までをトータルに検証する～」

8月29日（木）　10:00～12:00　第1会場（アクトシティ浜松 1F 大ホール）　座長：堺　常雄（聖隷浜松病院 総長）

いま医療保険者から求められる人間ドックとは

ヘルスケア・コミッティー株式会社　代表取締役
国立大学法人東京大学　特任助教 政策ビジョン研究センター/医学部附属病院
古井（ふるい）　祐司（ゆうじ）

1　背景

医療保険の財政運営の厳しさを背景に、新政権では保険者機能を活用した予防施策の推進に舵を切ることが示されました。“データ・ヘルス”（厚生労働省保険局）の導入です。

2　データに基づくヘルスケアの実施

医療保険者には健康づくりの推進が強力に求められ、保険者は被保険者本人のドックの結果データに基づき行動変容を促すことになります。まさに、データに基づくヘルスケア（保健事業）の実施です。従来からの医学的判定のもと早期発見・早期治療を徹底することに加えて、結果データを活用した受診者への意識づけが重視されます。なお、結果データによる意識づけが、実際に受診者の加齢に伴う悪化防止に資することは先行研究で示されています。また、健康づくりの継続性を担保する視点で、ドック受診が“点”で終わらないよう、受診者に対する年間を通じたアプローチが求められます。

3　医療保険者が人間ドック機関に求めること

多くの医療保険者は専門職や予防医学的なノウハウを有していません。したがって、今後、保険者は上記の保健事業を実行するために、外部の専門機関の力を借りる必要性が生じます。要するに、人間ドック機関が従来の健康チェック機能に加えて、受診者の意識を高めつつ、健康行動を促す機能を提供できれば、保険者とドック機関との新たな関係が形成されます。なお、保健事業の継続性の視点から、保険者としては特に被保険者が毎年継続して受診をするようなドック機関との連携を重視することが予想されます。このような視点から、今後のドック機関には、①ドック受診後の受診者と接点が持てる仕組みを有していること、②継続してコミュニケーションすること、が求められます。聖隷事業団ではこれを実現する仕組みを今年度より先行して導入されます。特に、CRM（Customer Relationship Management）の手法を活用して、受診者と継続したコミュニケーションを図る仕組みには既に全国の医療保険者が注目しています。

4　おわりに

国の予防施策の推進を受け、医療保険者とドック機関との関係は“潮目”を迎えます。70の大手企業の健康保険組合による研究会では、既にドック機関との連携のあり方の検討を始めています。ドック受診を被保険者との接点づくりの好機と捉え、ドックを起点とした健康づくりのPDCA（Plan-Do-Check-Act）をまわすことが医療保険者、そして保険者を支えるドック機関に求められます。

プロフィール

1993年　東京大学大学院医学系研究科修了 医学博士
　　東京大学医科学研究所、同大学医学部附属病院などを経て
2004年　同大学医学部附属病院22世紀医療センター助教就任
同　年　健康委員会（ヘルスケア・コミッティー）を株式会社化、同代表取締役就任
2012年　同大学政策ビジョン研究センター健康経営研究ユニット助教就任

厚生労働省、経済産業省、自治体、医療保険者団体などで委員を務める
専門は予防医学、保健医療政策

OS-9-2

「保険者機能」の発揮を通じた医療の質の向上

保険者機能の発揮による医療システムの有効活用を探る一考察

古井　祐司（東京大学政策ビジョン研究センター健康経営研究ユニット）

［背景および目的］

最近の研究により現役世代で心筋梗塞などの重症疾患で倒れる被保険者の3分の2は未治療である現状が示された。また，全死亡に占める突然死の割合は40代が最も高く，その86%が冠動脈系疾患であることから，リスク者を適時かつ継続して医療システムに乗せることの重要性がうかがえる。本演題では，特定健診制度の導入により，医療保険者に健診データが蓄積されることを背景に，生活習慣病の重症化防止や患者のQOL向上に寄与する，保険者機能を活用した仕組みの可能性に考察を加える。

［対象および方法］

地域保険および職域保険におけるそれぞれ十万人規模の特定健診データをもとに，冠動脈系疾患のリスクに基づき集団特性を把握した。そのうえで，被保険者の健診結果（健康状況）に応じた意識啓発プログラムを提供し，意識・行動変容の可能性を検証した。プログラムはリスクの組み合わせによりパターン化し，特に高リスク者に対しては提供する冊子自体を黄色，赤色にするといった工夫をした。

［結果および考察］

プログラムによる意識変容効果が認められた。非肥満者に比較して肥満者に対する啓発効果が高いものの，健診受診だけでは自らのリスクを理解している割合が3割台であった非肥満のリスク者に関しても，リスクの認知度は6割以上にあがった。受診勧奨域の被保険者についても，半数以上が治療の必要性を認め，受診を開始しており，早期に医療システムへ乗せることで重症化の防止につながることが期待される。今後，継続した受診や服薬，生活習慣改善を担保することが大きな課題であるが，保険者はレセプトを活用して受診をモニタリングすることも可能であり，被保険者とだけでなく，医療機関とも継続してコミュニケーションを図り，医療の提供に協同して取り組む仕組みづくりが重要であると考える。生産人口が減少する今後の社会において，医療システムの適切な利用を被保険者に促す仕組みづくりは，地域および職域での生産性の維持にもつながる有意義な取り組みである。

［結論］

保険者機能の発揮による被保険者の意識・行動変容効果とそれに伴う医療システムの有効活用に資する可能性が示唆された。

【略歴】

東京大学医学系研究科修了　医学博士

東京大学医科学研究所，同大学医学部附属病院22世紀医療センターを経て現職。国立大学の法人化に伴い，産学連携のもと健康委員会（ヘルスケア・コミッティー）を株式会社化し，医療保険者における予防医学の適用研究を進める。厚生労働省，経済産業省，自治体，保険者団体などで委員を務める。専門は予防医学，保健医療政策。

【主な所属学会】

日本医療・病院管理学会，日本産業衛生学会，日本公衆衛生学会

効果的な保健事業の再構築

～保健事業の運営実態からみた健康保険組合の優位性に関する調査研究結果を踏まえて～

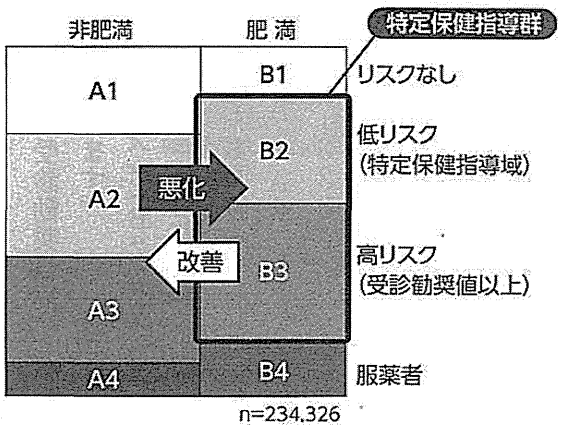
東京大学 政策ビジョン研究センター 健康経営研究ユニット 特任助教

医学博士 古井 祐司

図1　経年での改善者と悪化者の比較

健康分布上の肥満で低リスク(B2)および高リスク(B3)が特定保健指導の対象群です。特定保健指導の対象群から一年後に服薬以外の情報提供群(A1・A2・A3・B1)に移行したのは11,323人でした。その一方で、情報提供群から特定保健指導の対象群に移行したのは13,494人でした。職域では健康状況が悪化している人のほうが多いことが把握されました。

悪化 13,494人 > 改善 11,323人



項目名	低リスク (特定保健指導域)	高リスク (受診勧奨値以上)	単位
血圧(収縮時)	130～139	140以上	mmHg
血圧(拡張期)	85～89	90以上	mmHg
中性脂肪	150～299	300以上	mg/dl
HDLコレステロール	35～39	34以下	mg/dl
空腹時血糖	100～125	126以上	mg/dl
HbA1c(JDS)	5.2～6.0	6.1以上	%

厚生労働省「標準的な健診・保健指導プログラム(改訂版)」に基づき作成

特定健診データに基づき、集団を構成する人の健康状況を肥満・非肥満(BMI、腹囲のどちらかひとつ、あるいは双方が基準値以上は肥満)に分け、肥満・非肥満それぞれのなかで動脈硬化のリスク(高血圧、高血糖、脂質代謝異常)の有無とリスクがある場合には検査値に基づき低リスク(特定保健指導域)、高リスク(受診勧奨値以上)に分類。服薬は値に関わらず別に分けます。

はじめに

わが国の健康保険は、国民の医療を支える重要な仕組みであると同時に、健康保険法第150条に規定されるように、被保険者及び被扶養者の健康の保持増進を目的とした保健事業を実施しています。従来、保健事業の効果及び課題を捉えることは容易ではありませんでしたが、特定健診制度の導入などにともない、健診データ等の電子的標準化が進んだことで、構造的な分析が可能となりました。本稿では、健康保険組合連合会が実施された「保健事業の運営実態からみた健康保険組合の優位性に関する調査研究」などの研究成果や法制度の動向を踏まえて、効果的な保健事業のあり方を探ります。

1 働き盛り世代は健康増進の必要性が高い

働き盛り世代では、自らの健康や病気の予防に対する優先度は、仕事や子育て、介護といった事柄に比較して相対的に低くなりがちです。しかしながら、健診データで年代ごとの特徴を捉えると、20・30代ではBMIや腹囲の値は急激に上昇し、肥満化がもっとも進む年代であることがわかります。その後、加齢とともに血圧や血糖などの値が上昇を続け、生活習慣病のリスクが高まっています。生活習慣に関しても、運動不足や頻回飲酒といった病気のリスクを高める習慣は、厚生労働省「国民健康・栄養調査」などから退職者世代よりも働き盛り世代に多いことが示されています。

実際、働き盛り世代の健康状況はどのようになっているのでしょう。30の健康保険組合の協力を得て、23万人の被保険者の健康状況の経年推移を分析した、厚生労働科学研究循環器疾患・糖尿病等生活習慣病対策総合研究事業「集団特性に応じた効果的な保健事業のあり方に関する研究」(研究代表者 東京大学 古井祐司)の研究結果を確認します。ここで、集団の健康状況の特徴を可視化するために〝健康分布図®〟を使います(図1)。特定健診データに基づき、肥満・非肥満(BMI、腹囲より)に分け、肥満・非肥満の中でそれぞれ動脈硬化のリスク(高血圧、高血糖、脂質代謝異常)の有無と、リス