First Practical Major Step toward Appropriate Antimicrobial Use by the Government of Japan

Hiroki Saito, Hiroyuki Noda, Shunji Takakura, Kazuaki Jindai, Rieko Takahashi McLellan, and Kazunari Asanuma

Received: May 15, 2018. Accepted: August 20, 2018
Published online: August 31, 2018
DOI:10.7883/yoken.JJID.2018.208

Advance Publication articles have been accepted by JJID but have not been copyedited or formatted for publication.
First Practical Major Step toward Appropriate Antimicrobial Use by the Government of Japan

Hiroki Saito M.D., M.P.H.¹, Hiroyuki Noda, M.D., Ph.D.¹, Shunji Takakura M.D. Ph.D.¹, Kazuaki Jindai, M.D., M.P.H.¹, Rieko Takahashi McLellan, M.D., M.P.H.¹, Kazunari Asanuma, M.D., Ph.D.¹

1. Infectious Diseases Control Division, Health Service Bureau, Ministry of Health, Labour and Welfare, Tokyo, Japan (1-2-2 Kasumigaseki Chiyoda-ku, Tokyo, 100-8916)

Word counts:
Manuscripts: 895 words with 5 references,

Correspondence:
Hiroki Saito M.D., M.P.H.
Infectious Diseases Control Division, Health Service Bureau, Ministry of Health, Labour and Welfare, Tokyo, Japan
1-2-2 Kasumigaseki Chiyoda-ku Tokyo, 100-8916 Japan
Phone: +81-3-5253-1111 / Fax: +81-3-3595-2257
E-mail: kansensho@mhlw.go.jp
Key words:
Antimicrobial resistance, antimicrobial stewardship, primary care, acute respiratory infection, diarrhea

Running head:
First antimicrobial stewardship manual in Japan
著者: 齋藤 浩輝、野田 博之、高倉 俊二、神代 和明、高橋 里枝子、浅沼 一成

厚生労働省健康局結核感染症課 （100-8916 東京都千代田区霞が関 1-2-2）
Summary:
Antimicrobial resistance (AMR) is one of the top public health agendas in Japan. Since Japan published the national action plan (NAP) on AMR in 2016, the NAP implementation has been a major focus in Japan Ministry of Health, Labour and Welfare (MHLW). Japan MHLW recently published the 1st edition of “Manual of Antimicrobial Stewardship” (including English version), a narrative review with particular focus on outpatient setting of primary care and two common infectious disease conditions. This is one of very few occasions where MHLW proactively set a clinical guidance for health care delivery at facility level. Implementation of the manual will be further supported by the change in our social health insurance coverage.

Text:
Antimicrobial stewardship (AMS) is no longer just the norm at a healthcare facility but an important healthcare instrument to protect human health under the global health security agenda in the era of antimicrobial resistance (AMR). (1) AMR has been and will be a significant global health threat to all living creatures on earth. AMS, as a part of professional conduct for management of infectious diseases, needs to be promoted in order to mitigate the threat of AMR. (2)
In June 2017, the Government of Japan published “Manual of Antimicrobial Stewardship” based on the national action plan on AMR (English translation is now available). (3) This is a narrative review with consideration of evidence from Japan and current health care in Japan, and puts particular focus on practicability at point of
care. A previous study showed that the nationwide antimicrobial consumption per population was not substantially high in Japan compared with those in European Union and U.S.A.. However, alarmingly, more than three quarters of the oral antibiotic consumption, which accounted for more than 90% of the total antibiotic consumption, consisted of broad-spectrum antibiotics such as third generation cephalosporins, macrolides and fluoroquinolones. (4) Though on-going efforts aiming at promoting discreet outpatient antibiotic prescription have been made in different settings across countries, the Government of Japan had not published clinical guidance to promote judicial use of antimicrobial agents.

Based on the above findings, two key elements were integrated in this first national manual on AMS that make it unique. First, we aimed to reach out to medical professionals particularly involved in the outpatient setting of primary care where the majority of oral antibiotics are prescribed. While developing the manual, we acknowledged that the healthcare delivery in the outpatient setting is significantly different from that in the inpatient setting, and that available recourses, particularly diagnostics, are limited in the outpatient setting. Our recommendations can be incorporated into such outpatient setting in Japan.

Second, we focused on two disease conditions, acute respiratory tract infection (ARTI) and acute diarrhea, both of which are commonly seen in the outpatient setting, and mostly self-limiting without antibiotic therapy. However, antibiotic prescription for these conditions is still a common practice in Japan, and the spectrum of the antibiotics prescribed is often too broad. The manual shows how to determine whether antibiotics are indicated in such conditions. For example in ARTI, concurrent
existence of three types of airway symptoms, that is, runny nose, sore throat and
cough, with the similar extent usually indicates that the patient has common-cold with
viral etiology rather than any bacterial infection. In this case, we clearly express our
standpoint based on benefit-harm balance of antibiotic use at individual and society
level, and state that “Clinicians should not prescribe antibiotics”, instead of just
making the “do not recommend” statement.

The manual also shows practical illustrations of how to explain to patients and
their family that they do not require antibiotics for the moment and emphasizes the
importance of follow-up. A combination of looming concerns by a patient that
antibiotics may be indicated and by a doctor that the patient may want antibiotics
would lead doctors to prescribe them, and behavioral change on both ends
(prescribing antibiotics from doctor’s perspective and receiving them from patient’s
perspective) requires conscious and mutual effort in the patient-doctor relationship.

By providing the practical solutions to medical professionals on the frontline, the
manual aims to improve clinical management of the common outpatient infectious
diseases and to reduce unnecessary use of antibiotics.

Furthermore, Japan has changed the social health insurance coverage to
encourage implementation of this manual in a rewarding rather than a punitive way.
This leverage at policy level may further contribute to promotion of AMS at the level
of health care delivery. Future studies could evaluate the uptake of this manual and
the barriers to use as well as the policy intervention of the social health insurance
coverage at the national level.

Our final goal for antimicrobial use is still far to reach at this moment; reducing
the antimicrobial use to two thirds by 2020, which is one of the outcome indices for our national action plan on AMR. (5) This manual for AMS is the first major step we have taken for promotion of appropriate antimicrobial use in the human healthcare practice in Japan. At the same time, this manual can also be used as a reference for other countries, which helps Japan advance international cooperation, the sixth objective of the national action plan on AMR. We will continue our political commitment to AMR control, which also transforms actual practice in health care, and are eager to take the initiative in overcoming this global crisis in collaboration with partners across countries.

Conflict of Interest: None to declare

References:


