Local Survey on Use of Antibiotics and Antimicrobial Awareness

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Centre for Health Protection
Antibiotic Resistance

- Antibiotic resistance is an increasingly serious public health problem worldwide, including Hong Kong.
- It threatens the effectiveness of antibiotics now and in the future.
Antibiotic Exposure

- Antibiotic exposure leads to emergence of antibiotic resistance.
- Overall uptake of antibiotics in a population, as well as how the antibiotics are consumed, has an impact on antibiotic resistance.
Proper Use of Antibiotics

- In 2007/08, the DH launched a community-wide promotion campaign to enhance public knowledge and awareness of when antibiotics work and the importance of proper use of antibiotics.

- The messages are:-
  - Antibiotics are not panacea. Do not take antibiotics without medical advice. All antibiotics carry some side effects.
  - Unnecessary or improper use of antibiotics can make bacteria stronger and harder to kill.
Proper Use of Antibiotics

- In 2009, the public is advised to enhance their personal hygiene while they are taking antibiotics.
- The personal protection measures are:-
  - Practise frequent hand hygiene
  - Eat or drink only thoroughly cooked or boiled items
  - Disinfect and cover all wounds
  - Wear mask if you have respiratory infection symptoms
  - Young children with symptoms of infection should minimise contact with other children
Local Survey

- ICB has commissioned a territory-wide telephone survey to Social Science Research Centre of The University of Hong Kong.

- Baseline survey was conducted in November 2010 with 1,569 respondents successfully interviewed and a response rate of 69.2%.

- A follow-up survey will be conducted in May 2011 to evaluate the community-wide publicity campaign held during March and April 2011.
Results of Baseline Survey

Knowledge on antibiotics

- Significant proportion of respondents had incorrect faith in antibiotics and underestimated the risk of resistant microbes, believing that antibiotics could cure flu (34.3%) and viral infections (66.9%) and that resistant microbes did not require expensive or risky drugs to cure (54.3%).

- Enhance personal hygiene while taking antibiotics to cure the bacterial infection: 90.0% True, 6.3% False, 3.7% Don't know

- Correct usage of antibiotics can treat bacterial infection, but it would also kill normal bacteria in the body at the same time: 82.2% True, 10.5% False, 7.3% Don't know

- Antibiotics can kill or prevent growth of bacteria: 78.8% True, 15.7% False, 5.5% Don't know

- Use of antibiotics would increase the chance of acquiring resistant bacteria: 77.0% True, 14.2% False, 8.7% Don't know

- Antibiotics can cure diseases caused by viruses: 66.9% True, 24.9% False, 8.2% Don't know

- Antibiotics can cure influenza: 34.3% True, 58.0% False, 7.6% Don't know

- Anti-inflammatory drugs have the same function as antibiotics: 25.9% True, 65.4% False, 8.7% Don't know

- All Upper Respiratory Tract Infections should be treated with antibiotics immediately: 14.1% True, 79.2% False, 6.7% Don't know

- Infections caused by resistant microbes would increase risk of death: 79.4% True, 11.4% False, 9.2% Don't know

- Infections caused by resistant microbes would require prolonged treatment: 78.7% True, 11.9% False, 9.4% Don't know

- Infections caused by resistant microbes would increase the risk of the general population contracting a resistant strain of bacteria: 65.5% True, 20.9% False, 13.6% Don't know

- Treating infections caused by resistant microbes require medications which are expensive and associated with more serious side effects: 30.7% True, 54.3% False, 15.0% Don't know
Knowledge on antibiotics

- Mean and median of knowledge score were both equal to eight, i.e. the respondents answered correctly 8 out of 12 knowledge questions.

- This misunderstanding was especially noted in respondents who were female, older, married, of lower education level or with lower household income.
Attitude towards antibiotics

- 61.0% and 53.2% of respondents considered antibiotics necessary if sore throat or sneeze/cough ≥ one week.
- 41.9% of respondents considered antibiotics necessary if having fever for one to three days.
Attitude towards antibiotics

- 29.8% of respondents expected antibiotics within 7 days of illness, while over two-fifths (42.8%) expected antibiotics after > 7 days of illness.

![Bar chart showing the percentage of respondents expecting antibiotics at different time intervals.]

- Within 1 day: 0.8%
- 2 - 3 days: 11.2%
- 4 - 5 days: 13.3%
- 6 - 7 days: 4.5%
- Over 7 days: 42.8%
- No need to take antibiotics: 14.0%
- Don't know: 13.2%
Attitude towards antibiotics

About half (48.0%) and a third (32.4%) of respondents believed that new drugs and expensive drugs are always more efficacious.

- **New drugs are always more efficacious**
  - Completely agree: 15.1%
  - Somewhat agree: 32.9%
  - Somewhat disagree: 39.8%
  - Completely disagree: 12.2%
  - Base: 1,485

- **Expensive drugs are always more efficacious**
  - Completely agree: 10.6%
  - Somewhat agree: 21.8%
  - Somewhat disagree: 48.2%
  - Completely disagree: 19.4%
  - Base: 1,538

- **Everybody has a role to play in alleviating the problem of antimicrobial resistance**
  - Completely agree: 70.0%
  - Somewhat agree: 23.2%
  - Somewhat disagree: 4.6%
  - Completely disagree: 2.2%
  - Base: 1,526
Practice

- When taking antibiotics, more than two-fifths of respondents claimed that they would increase their personal hygiene practices.

<table>
<thead>
<tr>
<th>Practice</th>
<th>Increase</th>
<th>Same as usual</th>
<th>Base</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wear mask when having respiratory infection symptoms</td>
<td>65.1%</td>
<td>34.9%</td>
<td>(1,554)</td>
</tr>
<tr>
<td>Practise frequent hand hygiene</td>
<td>56.5%</td>
<td>43.5%</td>
<td>(1,550)</td>
</tr>
<tr>
<td>Disinfect and cover all wounds</td>
<td>55.8%</td>
<td>44.2%</td>
<td>(1,548)</td>
</tr>
<tr>
<td>Eat or drink only thoroughly cooked or boiled items</td>
<td>46.2%</td>
<td>53.8%</td>
<td>(1,557)</td>
</tr>
</tbody>
</table>
Practice

- Among those respondents (31.7%) who had taken antibiotics in past 12 months, a minority purchased the antibiotics in a dispensary without doctor’s prescription (5.7%), used leftovers from previous consultation (0.7%) or used leftovers from relatives or friends (0.3%).
Practice

Common reasons cited for purchasing/taking the antibiotics without doctor’s prescription: trusted their own experience more than a doctor’s diagnosis (39.2%), similar symptoms before (29.1%), convenient (20.2%), cheaper (12.3%), no time to consult a doctor (5.4%) and recommended by relatives/friends (4.1%).
Practice

- Majority of respondents stated that their doctors had reminded them about the dose and number of days (95.2%) and to finish all the antibiotics prescribed (94.8%) during their latest consultation.

- However, only about a third of them (32.8%) remembered that their doctors had told them that improper usage of antibiotics would increase the chance of acquiring resistant bacteria.
Practice

- Only 9.9% sometimes and 2.7% never followed their doctors’ instructions. Among them, over half (53.0%) stopped taking antibiotics when they thought they had recovered and around one-third (30.9%) sometimes forgot to take the antibiotics.
Practice

- Very few respondents had asked their doctor whether there were antibiotics in the medicine prescribed. However, a relatively higher proportion of respondents had asked the doctor about it for their children.
- Majority of respondents (98.5%) stated that they would not consult another doctor because their previous doctor had not prescribed antibiotics.

![Graph showing responses to doctor's antibiotic prescription]

- Asked the doctor whether the medicine prescribed includes antibiotics directly: 30.4% Yes, 69.6% No
- Asked the doctor why he/she included antibiotics in their prescription: 27.3% Yes, 72.7% No
- Asked the doctor why he/she did not include antibiotics in your prescription: 8.2% Yes, 91.8% No
- Consulted other doctor because of the doctor did not prescribe antibiotics: 1.5% Yes, 98.5% No

- Asked the doctor whether the medicine prescribed for their children includes antibiotics: 45.9% Yes, 54.1% No
- Asked the doctor why he/she included antibiotics in their children's prescription: 43.8% Yes, 56.2% No
- Asked the doctor why he/she did not include antibiotics in their children's prescription: 12.9% Yes, 87.1% No
Promotion

- Just more than half of respondents (55.5%) had heard of resistant microbes or antimicrobial resistance.
- Among them, nearly two-thirds obtained the information through news at radio, TV or newspaper (63.3%), columns in newspapers or magazines (25.8%), radio or TV programmes (21.0%), websites (16.0%) and TV/radio API (10.6%).

Respondents generally gave a higher rating for information obtained from health professionals compared to other channels.
World Health Day
7 April 2011

Save Use of Antibiotics Save Lives
善用抗生素 保护生命
Banner

- At entrance of DH and HA venues
Banner

- At Markets and Roadside
Safe Use of Antibiotics Save Lives

世界衛生日
World Health Day
7.4.2011
Poster

- Communication
善用抗生素 Smart Use of Antibiotics

<table>
<thead>
<tr>
<th>病菌</th>
<th>菌种</th>
<th>病例</th>
<th>病例 example(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>细菌</td>
<td>E. coli</td>
<td>尿道炎、腸胃炎</td>
<td>Urinary tract infection, diarrheal diseases</td>
</tr>
<tr>
<td></td>
<td>Staphylococcus pneumoniae</td>
<td>肺炎</td>
<td>Chest infection, middle ear infection</td>
</tr>
<tr>
<td></td>
<td>Staphylococcus aureus</td>
<td>皮肤及軟組織感染</td>
<td>Skin and soft tissue infection</td>
</tr>
<tr>
<td>病毒</td>
<td>Rhinovirus</td>
<td>普通感冒</td>
<td>Cold</td>
</tr>
<tr>
<td>流行性感冒病毒，如H1N1, H3N2</td>
<td>Influenza virus, e.g. H1N1, H3N2</td>
<td>流行性感冒</td>
<td>Influenza</td>
</tr>
<tr>
<td>疱疹病毒</td>
<td>Varicella-zoster virus</td>
<td>水痘</td>
<td>Chickenpox</td>
</tr>
<tr>
<td>病毒性</td>
<td>Enterovirus</td>
<td>手足口病</td>
<td>Hand, foot and mouth disease</td>
</tr>
</tbody>
</table>

2) 如有發燒，是否需要抗生素？

- 發燒是病徵，不一定要由細菌引起；如果出現發燒，請先諮詢你的醫生。

3) 如鼻涕呈現黃色或綠色，是否需要抗生素？

- 鼻涕混浊時，鼻涕轉濃及呈現黃色或綠色是常見的，不一定表示你已患上細菌感染。如有疑問，請諮詢你的醫生。

澄醫生問清楚 Ask the right questions

抗生素 咪食錯 Use antibiotics smartly

衛生署 24小時健康教育熱線: 2833 0111

www.chp.gov.hk

Department of Health

善用抗生素 Smart Use of Antibiotics

抗生素不是萬能藥 Antibiotics are not panacea

- 抗生素只適用於治療細菌性感染，但不能治療所有感染；對由病毒引致的疾病，如傷風和流行性感冒（流感）是無效的。
- 患上一般傷風和流感時，使用抗生素不但：
  - 治癒感染
  - 加速症狀

傷風和流感 不需抗生素

抗生素可以是有害的 Antibiotics can be harmful

抗生素可引致不良後果，例如：
- 副作用，包括噁心、嘔吐、便祕及腹瀉和頭痛
- 敏感反應，如紅疹、皮膚癢痕及呼吸困難
- 抗藥性：抗生素雖然可以治療細菌感染，但亦可同時殺死身體內的正常細菌，增加感染抗藥性細菌的風險，抗藥性細菌感染是難醫治的。近年數據顯示抗藥性細菌日益增多，並對大衆健康造成嚴重威脅。

抗生素可能引致的副作用可能包括：
- 副作用，如噁心、嘔吐、便祕及腹瀉和頭痛
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常見問題 Frequently asked questions

1) 何謂細菌和病毒？細菌和病毒是不同種類的微生物，病毒沒有細胞核，細菌有一個細胞核。細菌和病毒引致的不同疾病。細菌引致的疾病如結核病，而病毒引致的疾病如流感。

衛生署 Department of Health
While taking antibiotic which is necessary to cure your infection, the antibiotic also kills the normal bacteria in your body and predisposes you to acquire more resistant bacteria.

Therefore, you should enhance personal hygiene by:

1. Practise frequent hand hygiene
2. Eat or drink only thoroughly cooked or boiled items
3. Disinfect and cover all wounds
4. Wear mask if you have respiratory infection symptoms
5. Young children with symptoms of infection should minimize contact with other children
使用抗生素可治療細菌感染，但同時亦會殺死身體內之正常細菌，及增加感染抗藥性細菌的風險。

為了保障使用抗生素者的健康，請注意：
1. 時刻保持手部衛生
2. 食水和食物必須徹底煮沸及煮熟
3. 消毒及覆蓋傷口
4. 當有呼吸道感染徵狀時，請戴上口罩
5. 有傳染病徵狀的幼童，應盡可能減少接觸其他兒童
Antibiotics Bag / Bottle Label

ENGLISH

• This contains antibiotics. Please follow your doctor’s or pharmacist’s instructions in taking it.
• If suspected of allergic reaction (for example, skin rash or shortness of breath) after taking antibiotics, please consult a doctor immediately.

CHINESE

• 內含抗生素，請根據醫生或藥劑師的指示服用。
• 服用抗生素後，如果懷疑過敏反應(例如出疹或呼吸困難)，請即時求醫。
內含抗生素
This contains antibiotics

- 請根據醫生的指示服用。
  - Please follow your doctor’s instructions in taking it.
- 請根據藥劑師的指示服用。
  - Please follow your pharmacist’s instructions in taking it.
- 服用抗生素後，如果懷疑過敏反應
  (例如出疹或呼吸困難)，請即時求醫。
  - If suspected of allergic reaction
    (for example, skin rash or shortness of breath)
    after taking antibiotics, please consult a doctor immediately.
-guard against infections
-always wash your hands

Hand Hygiene

An easy and effective way to prevent infection

卫生署
Department of Health
何时应洗手

When to Wash Our Hands

1. 餐前及处理食物前
   Before eating & preparing food

2. 如厕后
   After using the toilet

3. 触碰公共设施后
   After touching public equipment

4. 咳嗽或打喷嚏后
   After coughing or sneezing

5. 接触病人前后
   Before and after coming in contact with patients

正确洗手五部曲

5 Steps For Proper Hand Washing

1. 用水弄湿双手
   Wet hands with water

2. 加入肥皂，搓洗至少20秒
   Apply soap, rub for at least 20 seconds

3. 用纸巾搓洗双手
   Rinse with water

4. 用纸巾擦手
   Dry with paper towel

5. 用湿巾擦拭上水龙头
   Use paper towel to turn off the faucet
Radio Announcement of Public Interest

- When it comes to using medicine, it’s best to seek your doctor’s advice.
- Did you know that antibiotics work against bacteria but not against viruses that cause a cold or the flu?
- So if you or your child has a cold or flu, consult your doctor to learn more about the condition and whether there is any need for medicine or drugs.
- There’s no need to insist on antibiotics.
Sharing Session
Promoting Proper Use of Antibiotics for Primary Care Doctors on 22 March 2011
Thank you