



Antibiotic use:
Views of consumers

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Antimicrobial Stewardship Workshop Naivasha

21.-22.
November
2015

Who are Consumers of Antibiotics

- ☐ Patients
- ☐ Prescribers
- ☐ Veterinarians
- ☐ Farmers



Patients views – why take antimicrobials?

□ Patients take antibiotics when they are sick they want to:

- Get the best treatment
- Recover from illness quickly
- Pay as little as possible
- Cleanse the body
- Protect and strengthen the body



Patient's perceptions around AMR and antibiotic use

- ❑ **Studies on consumers views in African settings are limited.**
- **Lacking collation of data & surveillance is part of the problem**
- **Despite that, findings show similar patterns to other parts of the world**

Examples

Literature review focusing on bacterial pathogens

- ☐ ABs are the most commonly prescribed medicines in hospitals
- ☐ 90.1% individuals seek care outside of their homes
- ☐ 94.7% of these take medicines & 36.2% receive ABs
- ☐ 31.7% do not receive a prescription from the doctor and 26.4% receive an AB from a dispenser

Source: Andrew Nyerere Kimang'a -A situational analysis of antimicrobial drug resistance in Africa: Are we losing the battle? -Ethiopia Journal of Health Science , 2012

<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3407837/>

Misguided beliefs and expectations on antibiotic use – USA Study

- Findings of a population-based, random-digit dialing telephone survey, including questions regarding respondents' knowledge, attitudes, and practices of antibiotic use.
 - 27% believed that taking antibiotics when they had a cold made them better more quickly,
 - 32% believed that taking antibiotics when they had a cold prevented more serious illness, and
 - 48% expected a prescription for antibiotics when they were ill enough from a cold to seek medical attention.

n=10000 questionnaires

location USA

Source: Consumer Attitudes and Use of Antibiotics- Eng et al., Emerging Infectious Diseases Journal – CDC 2003

Misguided beliefs and expectations on antibiotic use

- 58% of patients were not aware of the possible health dangers. National educational efforts are needed to address these issues if patient demand for antibiotics is to be reduced



Knowledge, attitudes and behavior regarding antibiotics use and misuse among adults in the community of Jordan

- ☐ 1141 adult respondents
- ☐ 67.1% believed that antibiotics treat common cold and cough.
- ☐ 28.1% misused antibiotics as analgesics.
- ☐ 11.9% of females showed inadequate knowledge about the safe use of antibiotics during pregnancy and nursing.
- ☐ 28.5% kept antibiotics at home for emergency use and
- ☐ 55.6% use them as prophylaxis against infections.

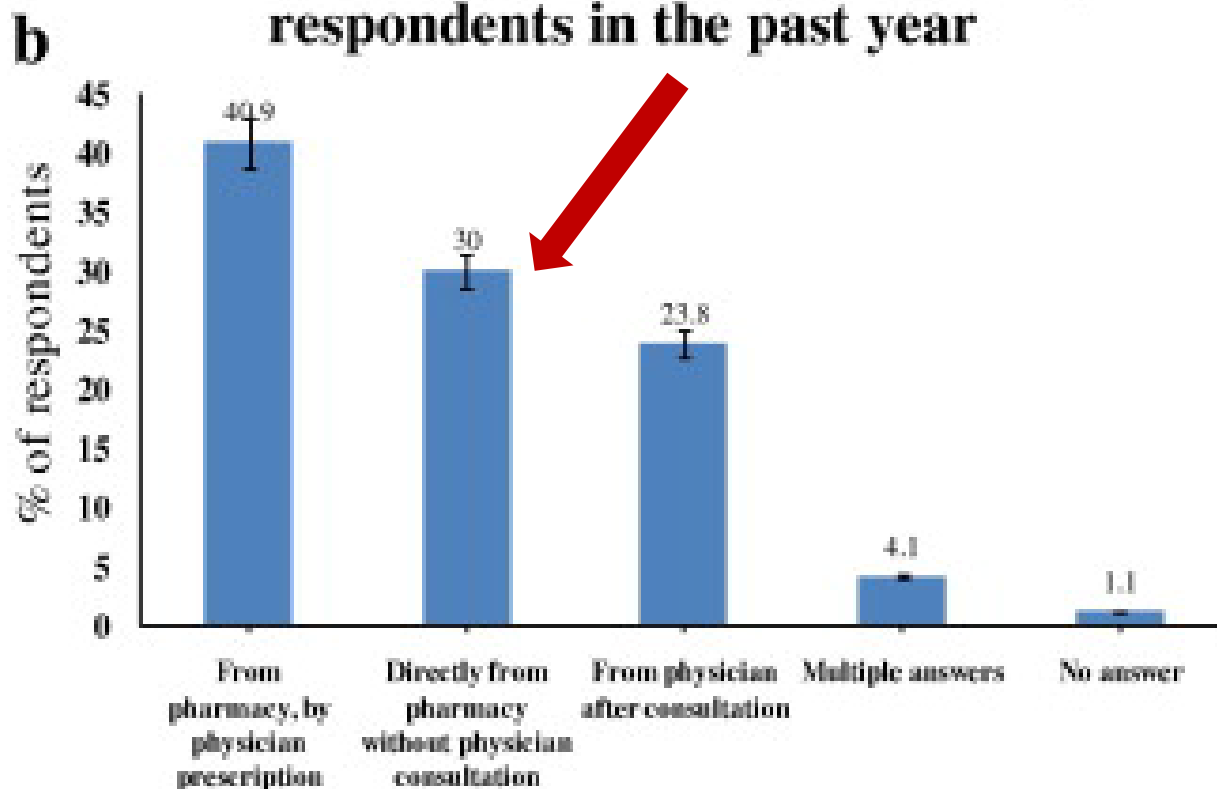
Source: Mayadah Shehadeh et al. Saudi Pharmaceutical Journal Volume 20, Issue 2, April 2012, Pages 125–133

Knowledge, attitudes and behavior regarding antibiotics use and misuse among adults in the community of Jordan

- ❑ 49.0% use left-over antibiotics without physicians' consultation while
- ❑ 51.8% use antibiotics based on a relative advice.
- ❑ 22.9% of physicians prescribe antibiotics over the phone and
- ❑ >50.0% routinely prescribe antibiotics to treat common cold symptoms.

Over the counter antibiotics

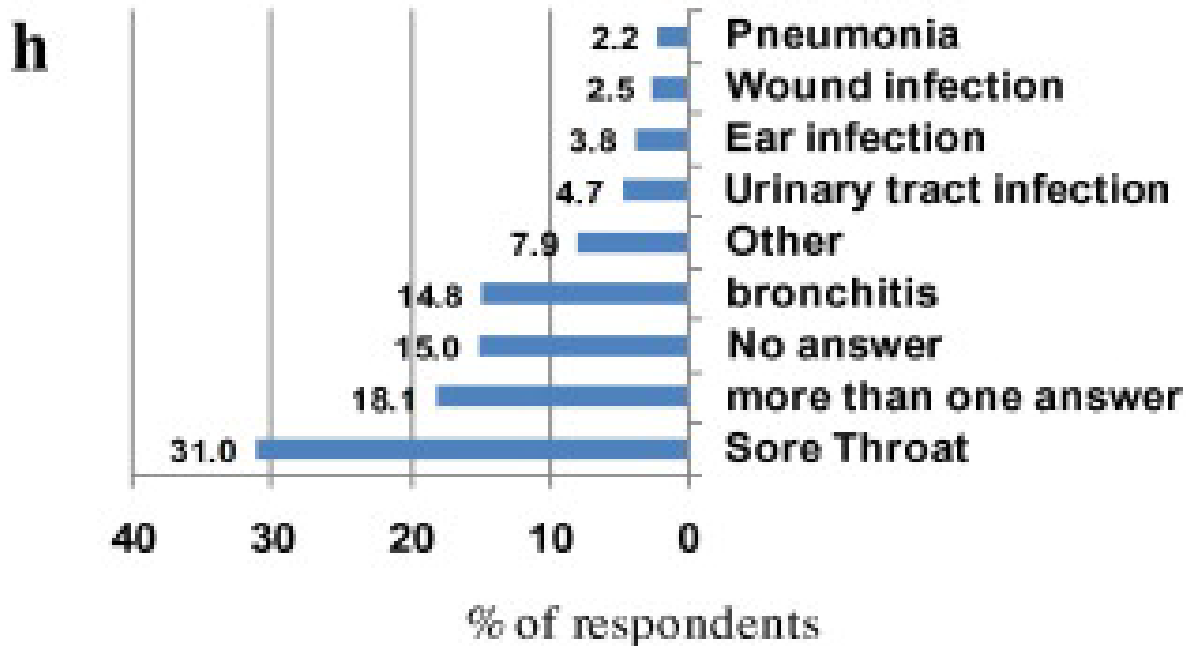
The sources of antibiotics obtained by respondents in the past year



Use of left-overs

Respondents used left over antibiotics in the past year

Reason given



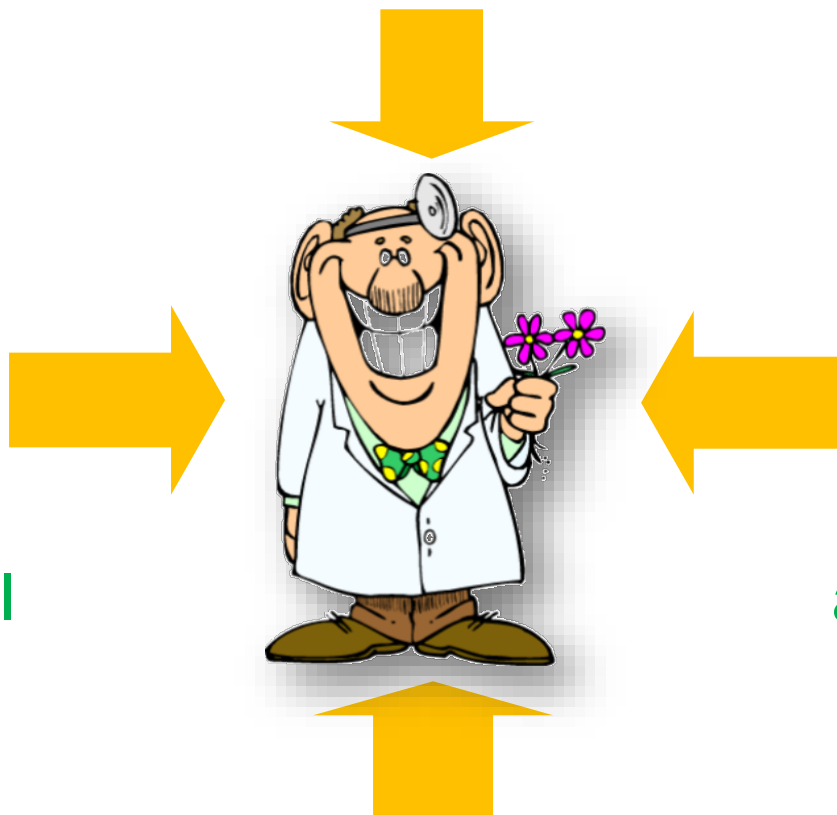
Antibiotic prescribing

Peer groups / prescribing and pharmacy advisors

Pharmaceutical
representatives

(Industry spends
35% of profits on
marketing)

Regulatory control
mechanisms



Patients'
demands

and
physician
aspirations

Hospital experts, formularies and guidelines

Antibiotic Prescribing in DR Congo

- **A Knowledge, Attitude and Practice Survey among Medical Doctors and Students – 184 respondents**
 - Knowledge about AB was low (4.9 of 8 points)
 - Confidence in AB prescribing was high (88.6%)
 - ABR was recognized as a problem though less in their own practice
 - **BUT:** Local AB guidelines and courses about AB prescribing are welcome (73.4% and 98.8% respectively).

Source: Kamala Thriemer et al. PLoS One. 2013; 8(2): e55495.

Not in my backyard

- ☐ **Systematic review of clinicians' knowledge and beliefs about antibiotic resistance from 2015 shows:**
- ☐ Clinicians believe antibiotic resistance is a serious problem, but think it is caused by others. This needs to be accommodated in interventions to reduce antibiotic resistance.

Oxford Journals Journal of Antimicrobial Chemotherapy 2015 A. R. MCCULLOUGH ET AL

Antibiotic Resistance (ABR) – A multi-country Public awareness Survey

Recently released WHO survey

- ❑ Conducted in 12 countries between September 14th to October 16th
 - African Region: Nigeria and South Africa
 - Region of the Americas: Barbados and Mexico
 - South-East Asia Region: India and Indonesia
 - European Region: Russian Federation and Serbia
 - Eastern Mediterranean Region: Egypt and Sudan
 - Western Pacific Region: China and Viet Nam
 - ❑ Methodology – 14 question survey/ face to face interviews
- 9, 772 respondents

Key findings

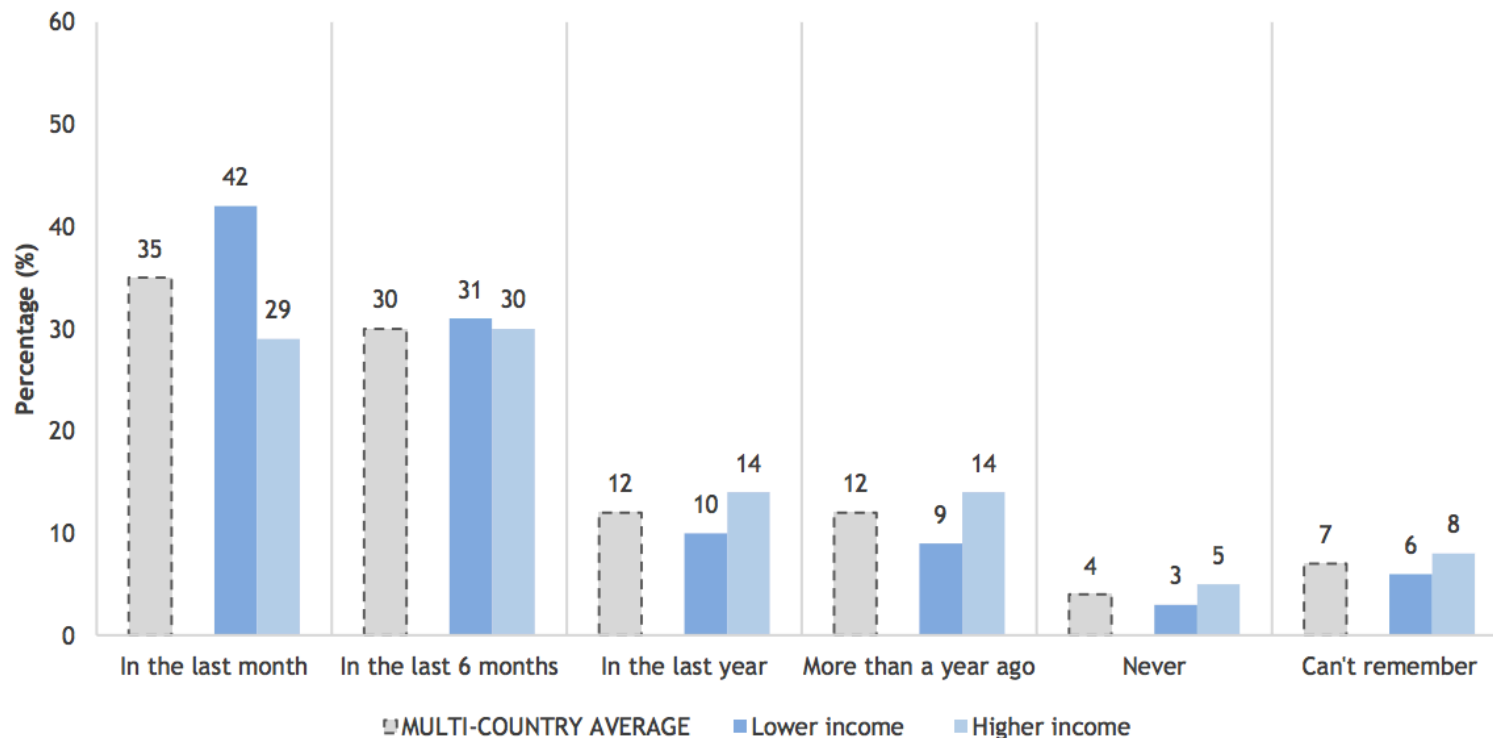
AFRICA

1. AB use is widespread 65% of respondents reported use in the last 6 months, 35% within past month
AB use higher in LMICs : 42%/ month / 29%
Patterns of use: Young people 14 – 22 yrs (24%), over 65 yrs (24%)
2. Source of ABs: 81% prescribed by doctors or nurses, 93% from a pharmacy or medical store
3. Levels of knowledge on AB use – how & when to use AB: 25% said it is acceptable to use ABs given to family member or friend
43% think it is acceptable to use same AB they had used in the past
32% said it is okay to stop ABs when feeling better
4. Mixed levels of awareness and understanding

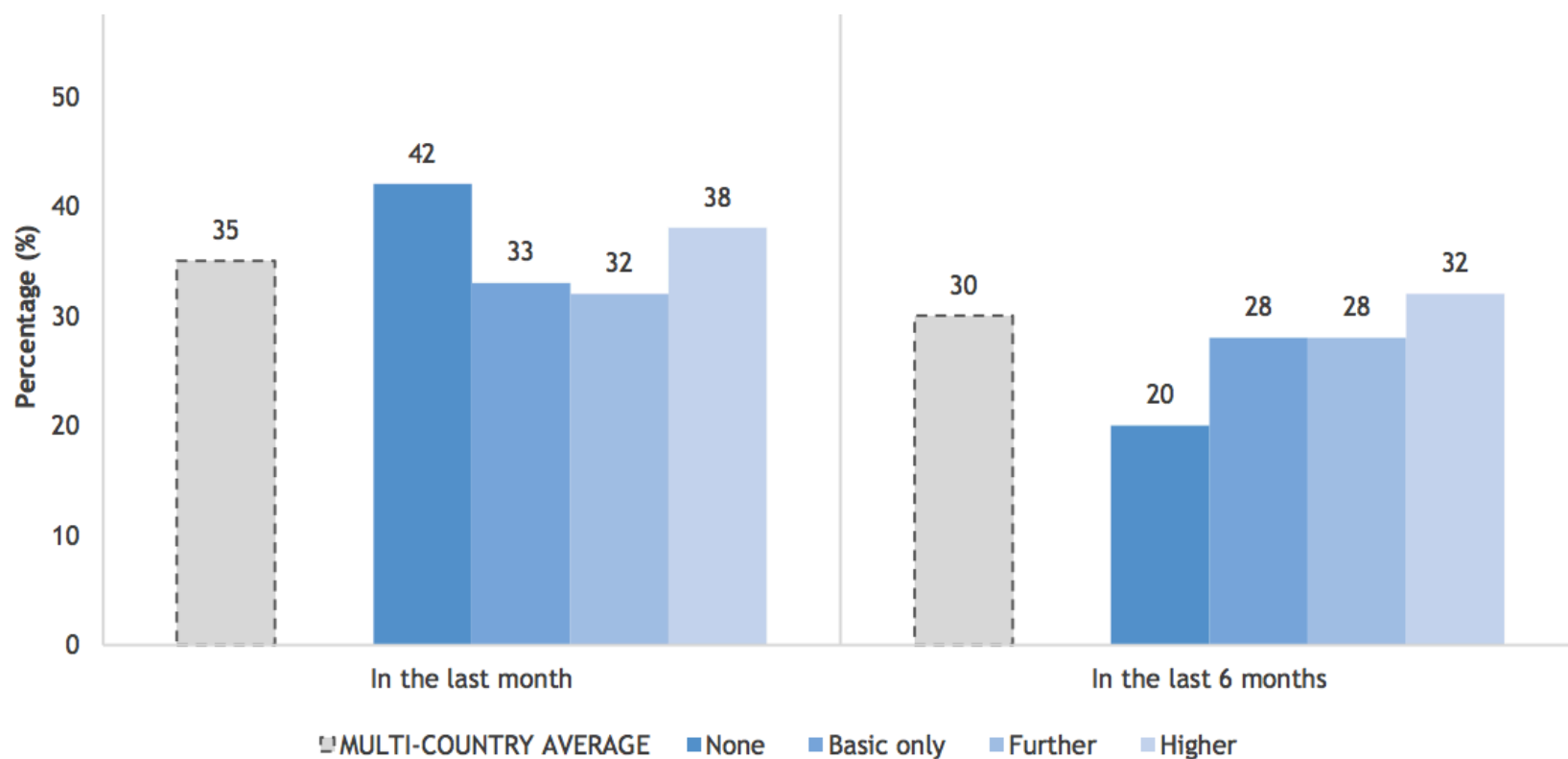
WHO 2015 Antibiotic Resistance: Multi-Country Awareness Survey

http://apps.who.int/iris/bitstream/10665/194460/1/9789241509817_eng.pdf

Consumption of Antibiotics per income



Consumption by education level



Antibiotic use in animal husbandry

- Antibiotic use in animals is higher than in humans, but
 - Few KAP studies have been done regarding antibiotic use in animals:
- Opinions of Spanish pig producers:
 - Antimicrobials are perceived as valuable cost-effective tools for animal health and husbandry and there is little concern among pig producers about the harmful effects on public health of on-farm antimicrobial use.
 - Producers are not aware of the risks of AMR

Research in Veterinary Science Volume 97, Issue 1, August 2014, Pages 26–31

IN short:

- ❑ Antibiotics are highly over- and misused substances
- ❑ **Lack of knowledge** is the main driver paired with lack of regulation and their enforcement.



- ☐ **Benefit of antibiotics is individual**
- ☐ **The risk of AMR is collective**

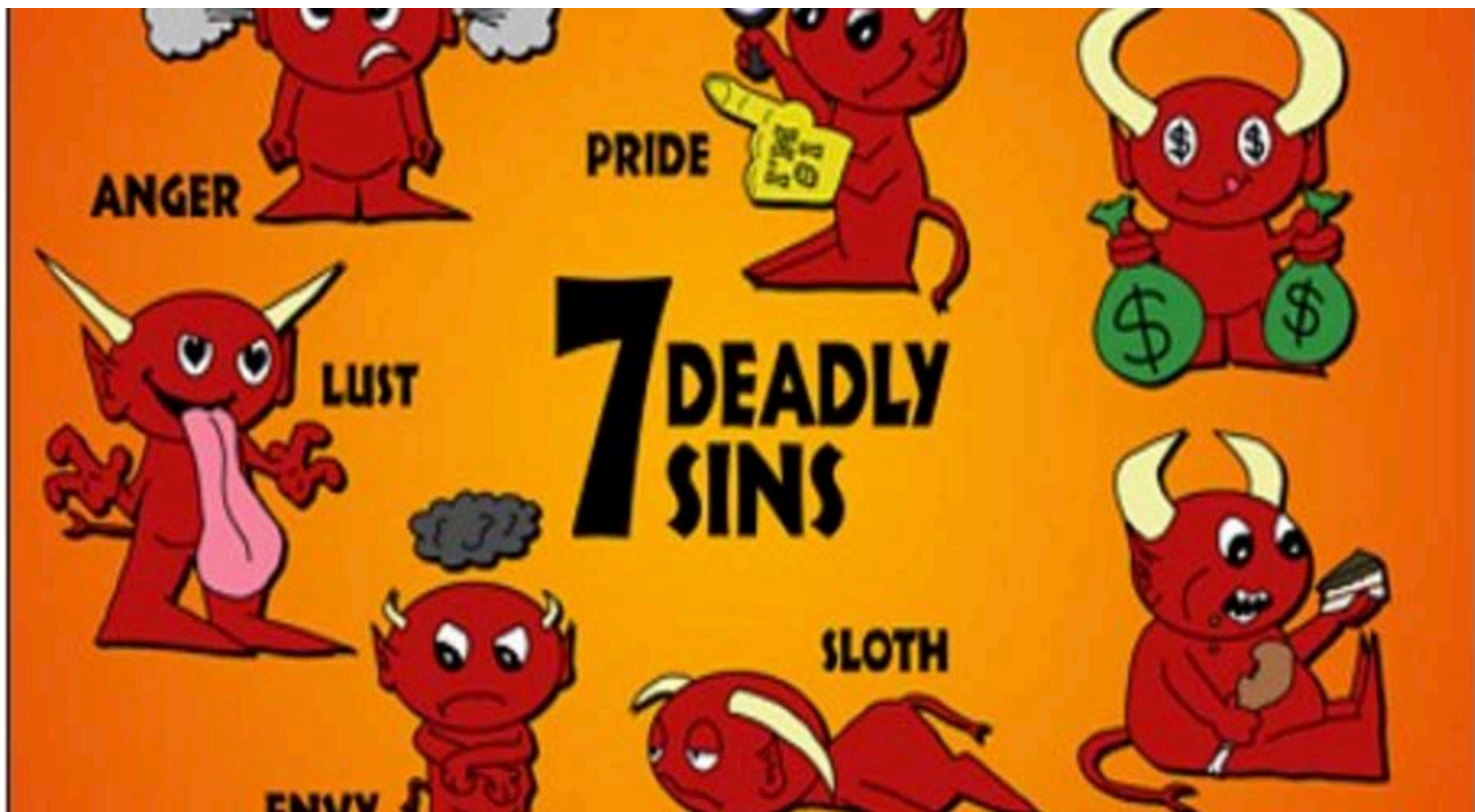
WHO Recommendations

□ These survey findings point to the following needs:

- ♣ to better understand why antibiotics are being used without having been prescribed.
- ♣ to increase public education so that people better understand:
 - which conditions can be treated with antibiotics and which cannot (e.g. antibiotics are not effective against colds and flu).
 - why antibiotics should only be taken when they have been prescribed to a specific individual for a particular episode of illness. –
 - the importance of taking the full prescription as prescribed.

WHO 2015 Antibiotic Resistance: Multi-Country Awareness Survey
http://apps.who.int/iris/bitstream/10665/194460/1/9789241509817_eng.pdf

Can we learn something!!!!



Conclusion

‘Seven Hard Facts we need to swallow about antibiotics ’

1. Antibiotics won't cause resistance if I take them correctly
2. Its our bodies that become resistant to ABs
3. ABs cure for common cold and flu
4. If I feel better I can stop my Abs
5. I can take leftovers or some from family friends
6. Resistance only happens with repeated causes
7. It's the medical professions fault

Marc Mendelson The Conversation: Seven Hard Facts we need to swallow. Nov 17, 2015

Why is this knowledge of consumer beliefs important?

- Understanding the problem and consumer perception is an important step in developing value added interventions

GAP – Improve awareness of AMR



- AMR is everybody's problem – we can make a difference

Acknowledgements

- ☐ ReAct
- ☐ EPN
- ☐ Dr. Susanne Khuele

Thank you!

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