



The Application of Telemedicine in the Virtual Doctor Programme

Dr Michael Thompson & Mr Huw Jones of the Virtual Doctors



Services provided by telemedicine

- **Primary care and specialist referral services**
- **Remote patient monitoring**
- **Consumer medical and health information**
- **Medical education**

American Telemedicine Association

- Telemedicine
- Telehealth
- E-Health
- M-Health

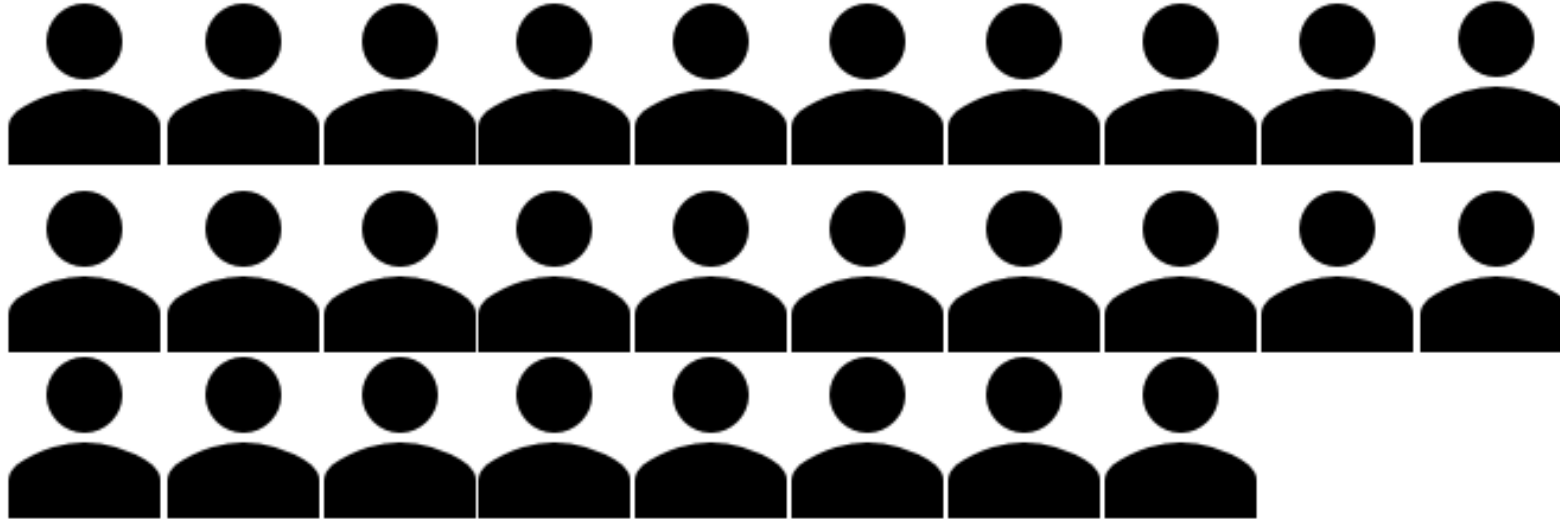
the
**virtual
doctors**



**AT THE INTERSECTION OF TECHNOLOGY AND MEDICINE
(TELEMEDICINE)**



Physicians (per 10,000 people)



World Health Organization's Global Health Workforce Statistics, OECD, supplemented by country data
Physicians per 1000 population Zambia 0.2 UK 2.8 (2011)

Mobile phone
internet
revolutionising
access to
information





Dr Michael Thompson

MB BS, MRCP, DRCOG, DCH, DTM&H
Trustee Virtual Doctors





Why not use Skype, Facetime or WhatsApp?



Enabling service deployment: 18 Critical success factors

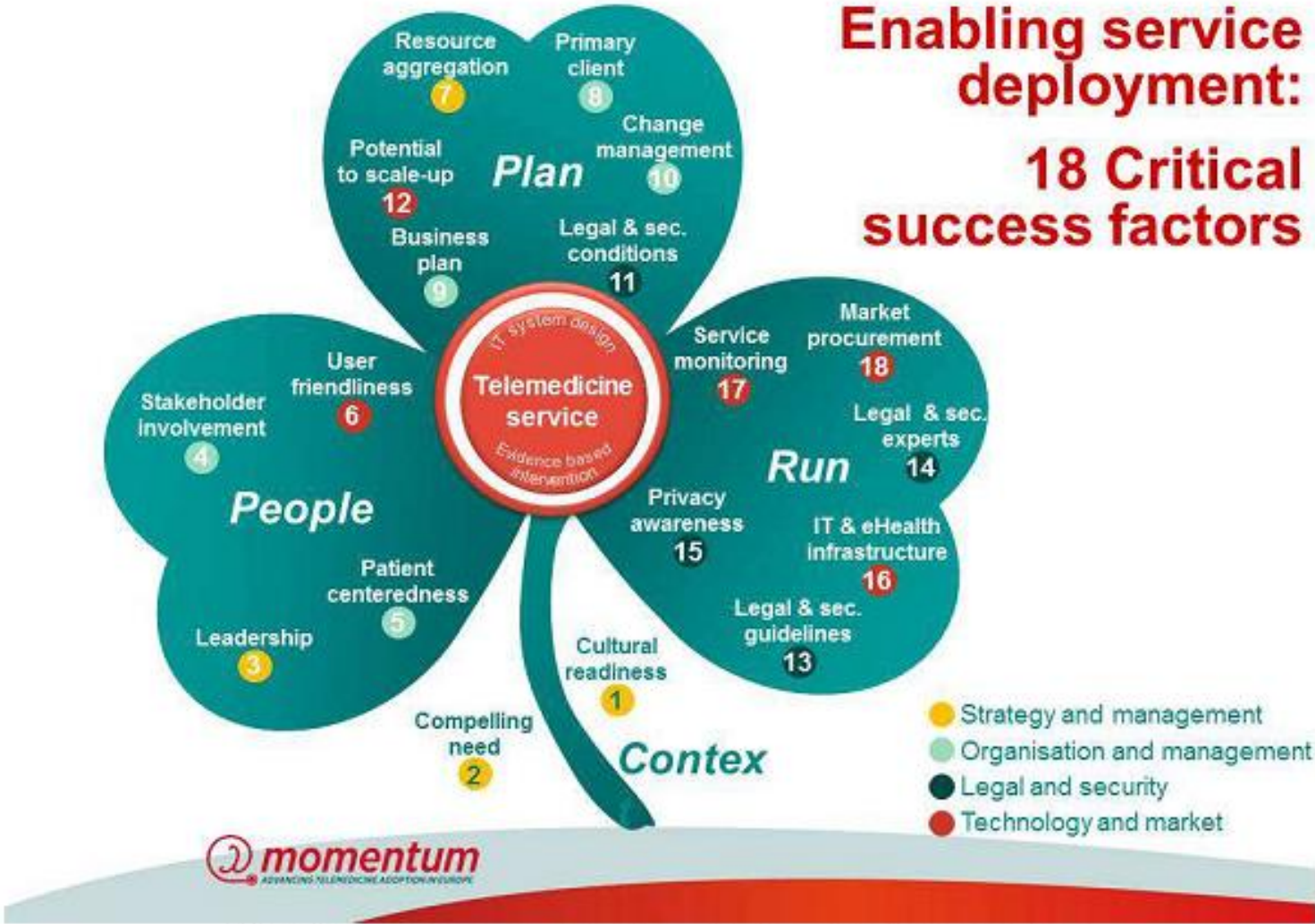
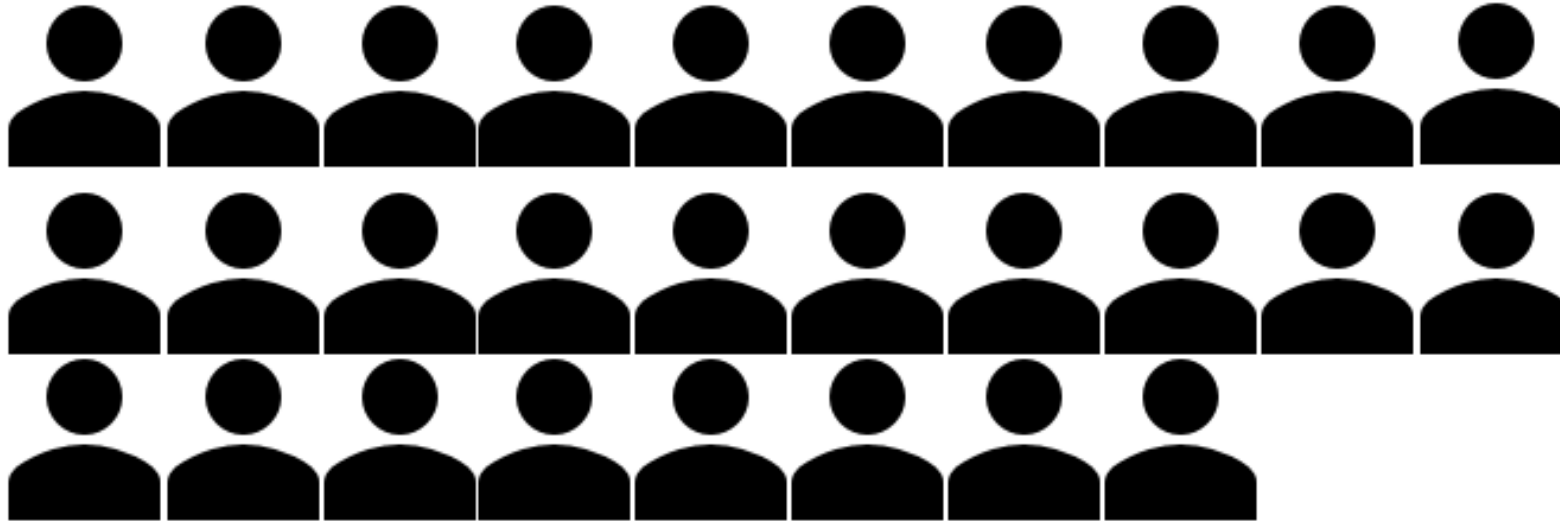


Figure 2: Enabling service deployment - 18 critical success factors



Physicians (per 10,000 people)

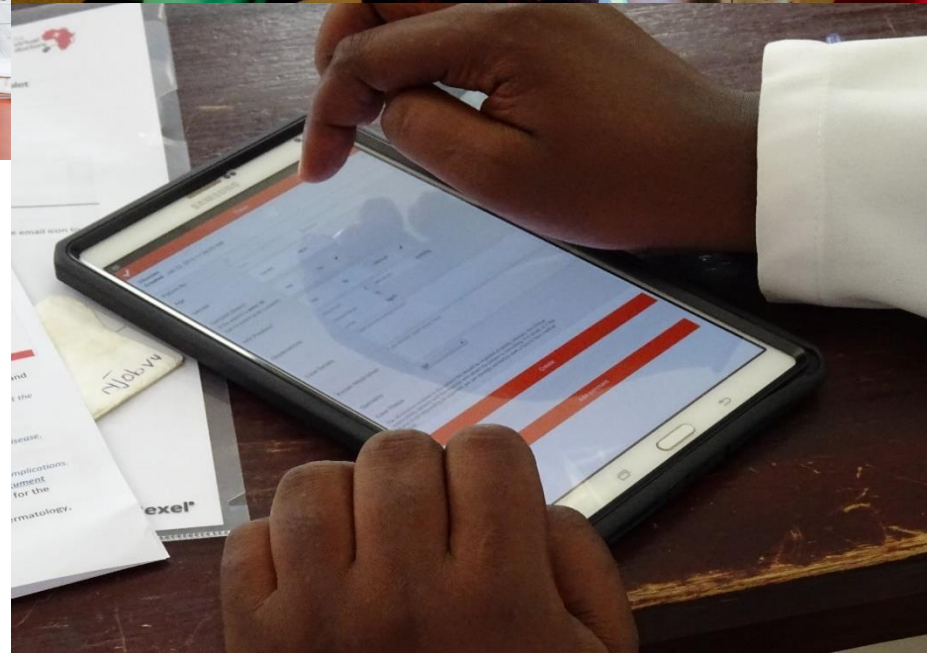


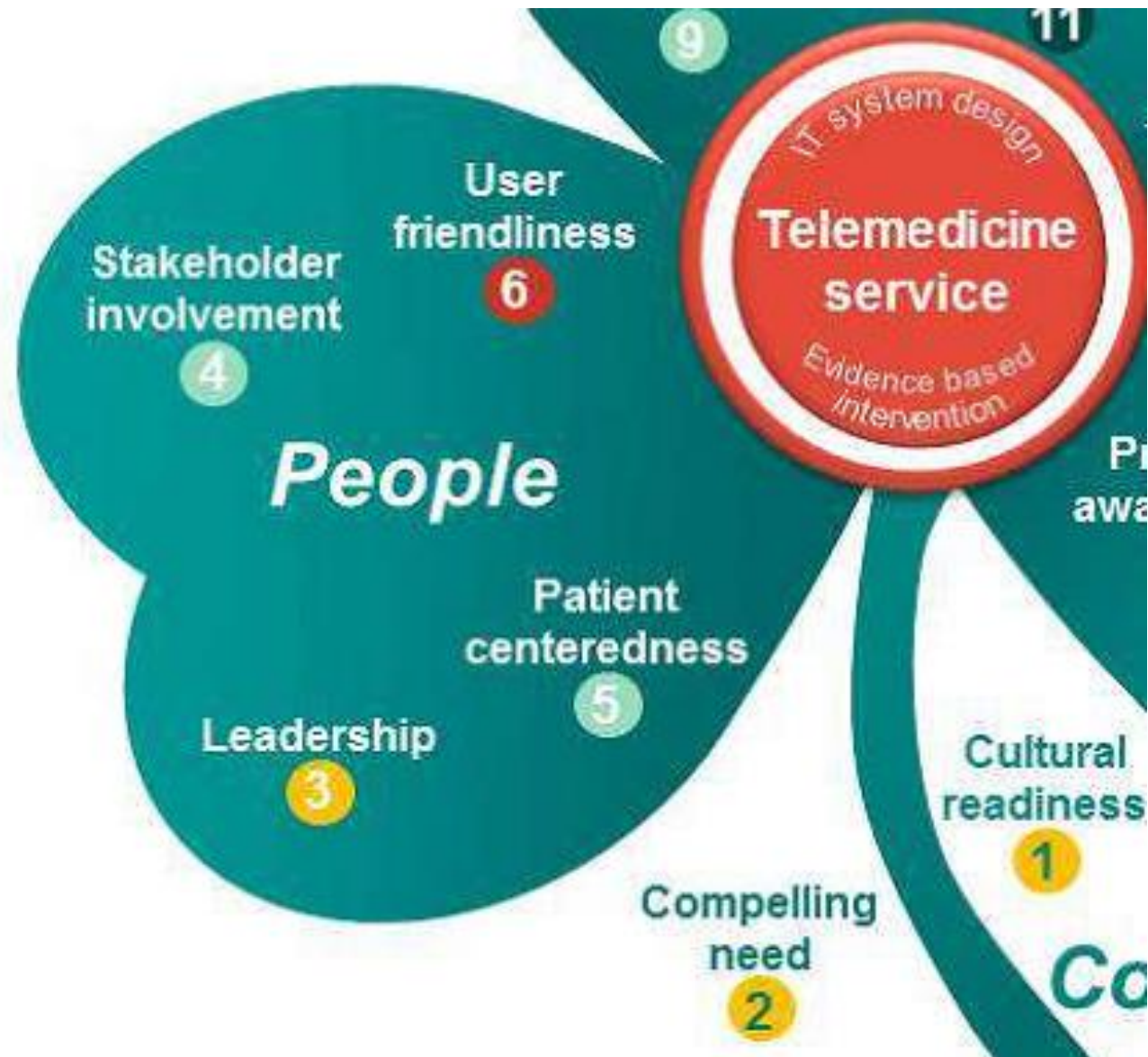
World Health Organization's Global Health Workforce Statistics, OECD, supplemented by country data
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Telemedicine for rural clinics

The Virtual Doctors uses mobile network internet to connect rural health centres and district hospitals with doctors for diagnostic and treatment advice





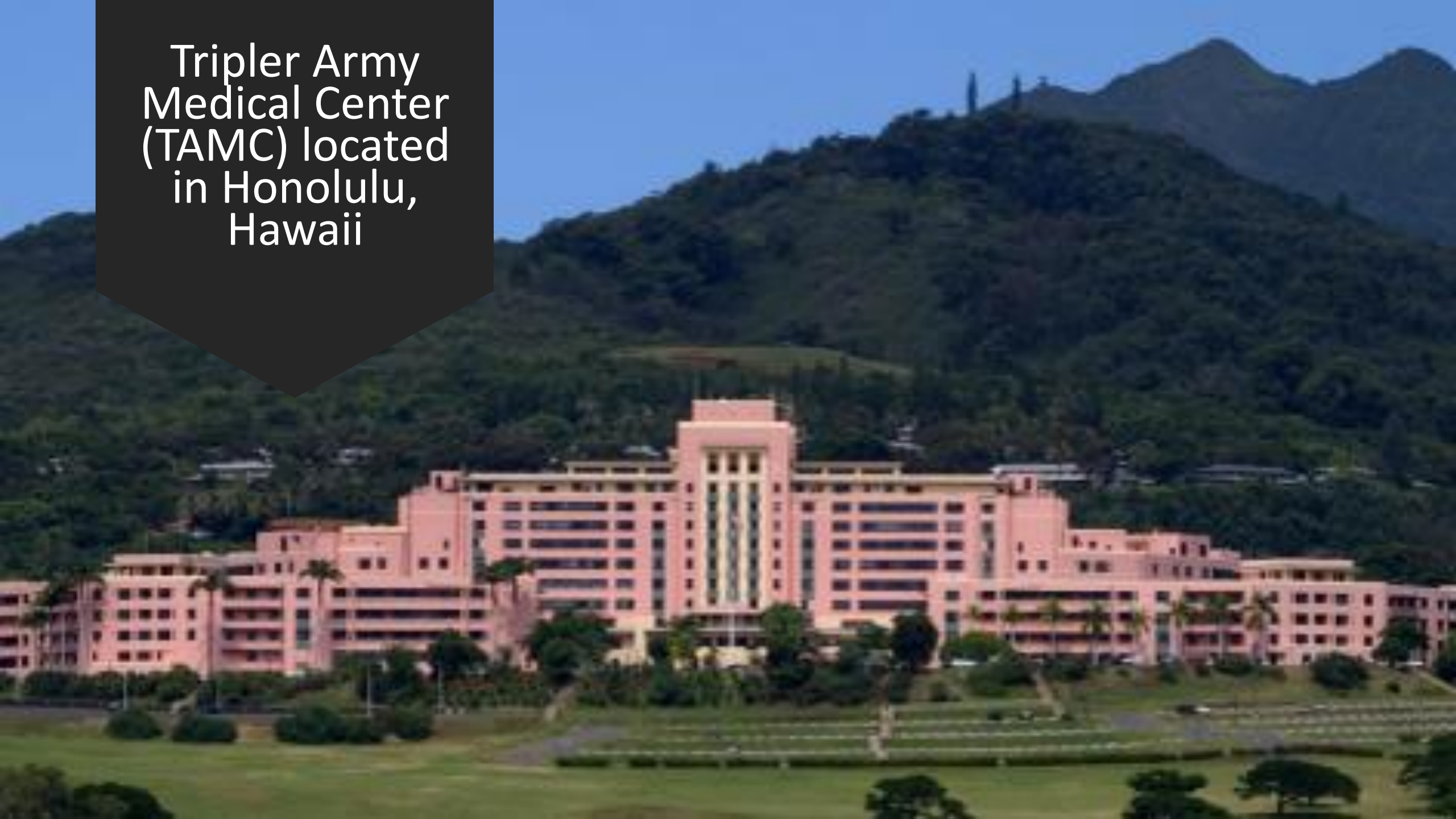
The Pacific Island Health Care Project

Tripler Army Medical Center, Honolulu

US Associated/Affiliated Pacific Islands (USAPI) three freely associated states:
Marshall Islands, Federated States of Micronesia, Palau,

+ three Territories: American Samoa, Guam, and Commonwealth of the
Northern Mariana Islands.

Tripler Army
Medical Center
(TAMC) located
in Honolulu,
Hawaii





Donald A.
Pearson
Medical Director,
Emeritus, Pacific
Island Health
Care Project
US Army
(Retired)







Willem Einthoven
Born on May 21,
1860 in Semarang
on the island of
Java



Nobel Prize for
Cardiac
Physiology 1924





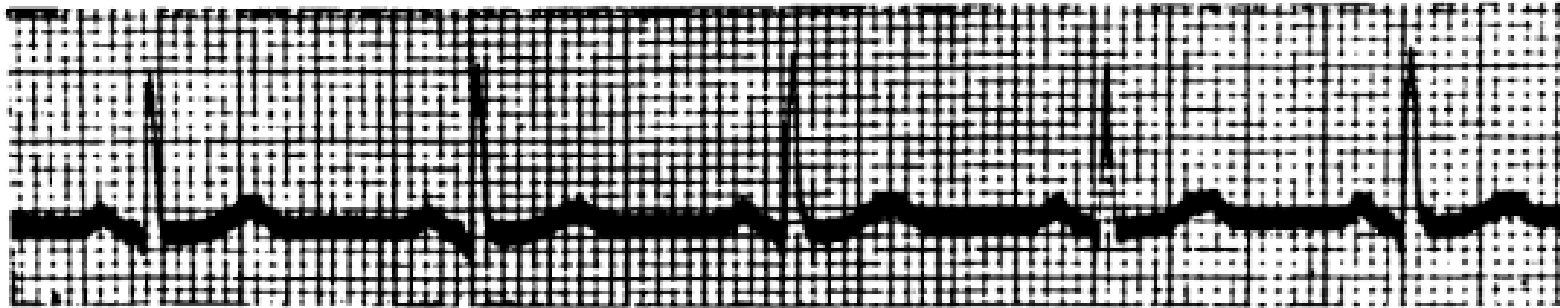


Figure 8a (opposite page) and 8b (above). 8a: *Patient sitting in the university hospital while his telecardiogram is being taken in the physiological laboratory. The hands are immersed in strong salt (NaCl) solution for lead I. (Print taken from the original negative for the illustration in "Le Télécardiogramme" 1906* ³³.

8b: *Result of recording. Note excellent quality of tracing transmitted via **telephone wire**.*

The cooperation of the clinician Nolen at Leiden was luke-warm and after a few years came to an end, when the connection was broken. It was said later that the clinician resented that the physiologist sometimes reported by **telephone** that he could see an extrasystole before the clinician could feel the corresponding intermission of the pulse (de Waart¹⁰⁸). According to Fahr⁶⁷ however the immediate cause of disagreement concerned the cost of maintenance of the connection between hospital and laboratory which was paid jointly by the two partners. As Fahr tells it, the clinician Nolen refused to prolong this arrangement because he felt that all the credit was going to Einthoven and that he was not even getting

Enabling service deployment: 18 Critical success factors



Figure 2: Enabling service deployment - 18 critical success factors



Clinician:
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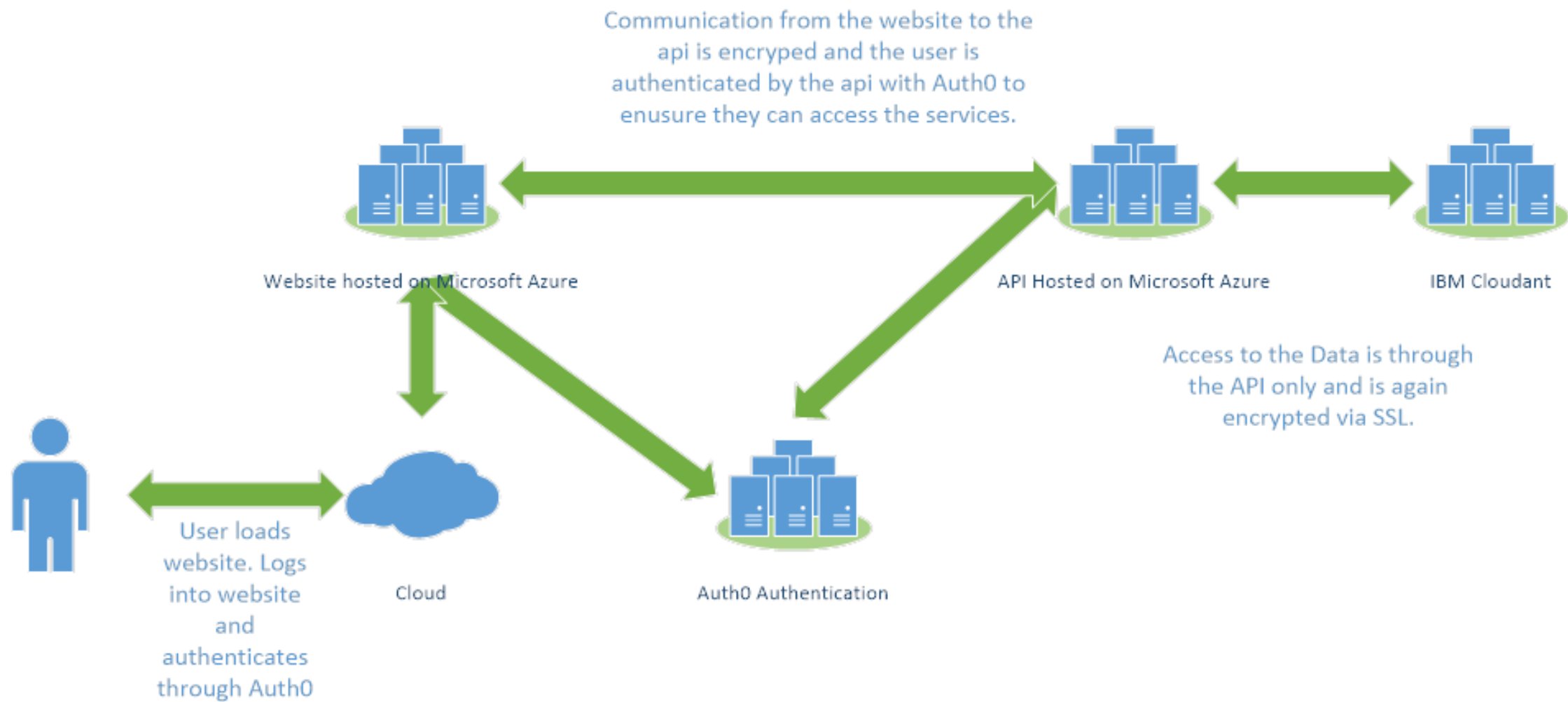
Patient No.

Age

Gender

Consent Given?
(If the patient is **under 16**, has the parent given consent?)

Do you agree for a Virtual Doctor representative to contact you to follow up on treatment?

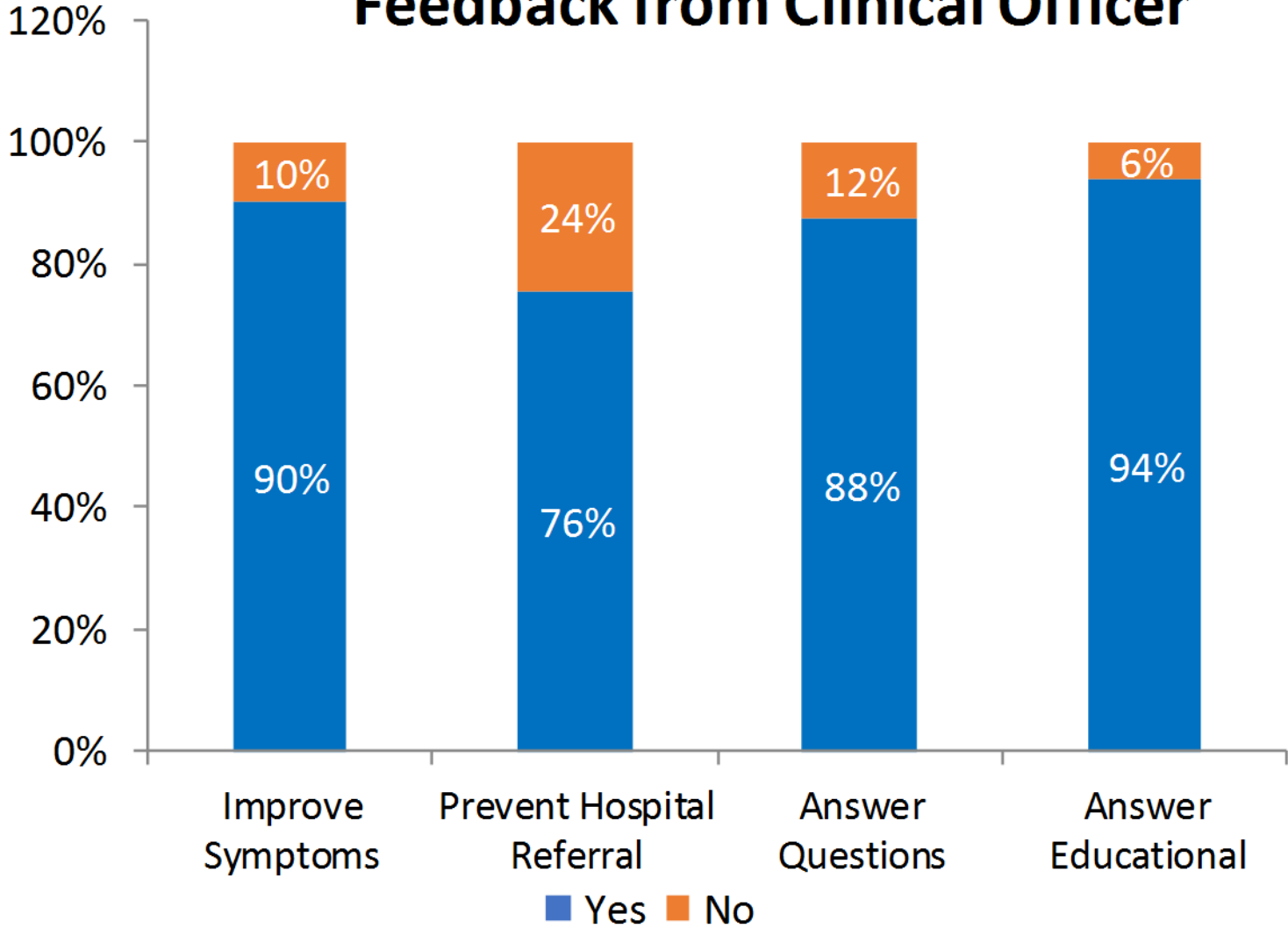


Legal issues

- Privacy, confidentiality & data security
 - Responsibility
 - Licence to practice
 - Patients rights and consent
 - Re-imburement or payment
-
- Report on the identified legal issues of the Baltic ehealth Project www.baltic-ehealth.org



Feedback from Clinical Officer



Evidence for Supported Self Care at Scale
A population approach to evaluating
technology enabled support for long term
condition management
Short Report March 2016
Cees van Berkel¹, Maurice Smith², Dave
Horsfield² and Helen McManus

- Whether it has been research or evaluation, the assessment of telehealth technologies has often been difficult and sometimes controversial.
- Some of the difficulty appears to have arisen from the mistaken elevation of this technology from a means of intelligence gathering and monitoring to a form of treatment in its own right.
- By doing this we fail to evaluate and appreciate the real challenge of technology: the machine will do what it was built to do, it's the way that we use it that determines its effectiveness.

Enabling service deployment: 18 Critical success factors



Figure 2: Enabling service deployment - 18 critical success factors

Getting it right requires a new approach, one that may appear paradoxical yet is ultimately obvious: digitising effectively is not simply about the technology, it is mostly about the people.

National Advisory Group

Robert Wachter, MD (Chair) Professor and Interim Chairman, Department of Medicine, University of California, San Francisco on Health Information Technology in England. Aug 2016

the
**virtual
doctors**



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