

Institution's Innovation Council

Conducted a session on

Building an Innovation/Product Fit for Market

Thursday 19th August, 2021, 11 am at

Gray's Lecture Hall, Narayana Medical College (offline), Zoom portal (online)

Speaker



By

Mr. Arun Sethuraman,

(Gen. Management Program, Harvard Business School, USA)

Founder and Chief Executive Officer,

Crely Healthcare Private Limited,

7 Temasek Blvd, Singapore 038987.

Facebook Link:

https://m.facebook.com/story.php?story_fbid=3876445979127547&id=216327238472791

YouTube - https://www.youtube.com/watch?v=dIB6uNOQ5_Q

IIC - President



Dr. Surya Prakasa Rao, MD

Professor and Dean, Narayana Medical College,
Nellore, Andhra Pradesh, India.

IIC - Convenor



Dr. Sivakumar Vijayaraghavalu, Ph.D.

Professor and Head, Narayana Translational Research and Incubation Centre,
Mobile - 8925744196; Office - 0861-2355511 extn. 2406;
E-mail - drvshiva@narayanamedicalcollege.com

August 16, 2021

Institute Innovation Council – IIC

Circular

The IIC is organizing a session entitled - **Building an Innovation/Product Fit for Market**, by **Mr. Arun Sethuraman**, graduate from Harvard Business School, USA; founder and chief executive officer, Crely Healthcare Private Limited, Singapore. It is scheduled on August 19, 2021; 11 am at Gray's lecture hall, Narayana Medical College. All the Narayana professional Colleges faculty, students and IIC members are requested to attend.


Dean & IIC President
Narayana Medical College, IIC

Copy to

All members of IIC
The Dean, Dental College
The Dean, Nursing College
The Principal, Physiotherapy
The Principal, Pharmacy College
All the HODs, Medical College



Session on Building Innovation/Product Fit for Market by Mr. Arun Sethuraman, Founding CEO of Crely Healthcare, Singapore - is the fourth event in a row after registering our Institute Innovation Council (IIC) with Ministry of Education's Innovation Council.

IIC staff - & - student members from Narayana Professional Colleges – Medical, Dental, Nursing, Pharmacy and Physiotherapy attended the session. The non-IIC students and faculties also showed interest and attended the session physically and virtually via zoom online portal.

The session was presided by Dr. S. Indira, Dean of Narayana Nursing Colleges, Nellore, AP. The IIC – Convener, Dr. Sivakumar Vijayaraghavalu welcomed the audience and introduced the speaker as follows -

Good morning and Greetings to one and all present in this lecture hall; and those who joined via zoom online portal. I, Dr. Sivakumar Vijayaraghavalu, IIC- Convenor, Narayana Professional Colleges, Nellore, India; with immense pleasure welcome you all to this session on Building Innovation/Product fit for Market; on behalf of our organization and our honorable IIC –president and dean medical college, Dr. SP Rao; and Dean, Dental college- Dr. Ajay, Dean Nursing College – Dr. Indira; Principals of pharmacy and physiotherapy – Dr. Harinatha Baba & Dr. Tirupathi.

Our IIC got approved recently from MoE's IC; we are happy to share that in less than a month we conducted 3 activities and this is fourth one in a row. At this juncture; would like to record, that we are able to march at this pace; only because of the support, help and advice of our honorable dean – Dr SP Rao. Heartfelt thanks for your help sir. He always insists on inculcating research bent of mind in our students and faculties and ardent advocate of importance and building of Innovation ecosystem.

Today's speaker – Mr. Arun Sethuraman, was kind enough and readily accepted to deliver a talk despite his busy schedule. He founded Crely Healthcare solutions in 2017 with a mission to reduce post - Surgical Site Infections and to improve the health outcomes and patient experience.

Prior to Crely he worked as a president and International – Group Information Officer for Stryker Corporation, Michigan, USA based Medical Device Company, where he led the transformation of technology services for all markets outside the USA; through smart integrations with hospitals & other value chain partners.

He also championed the setting up of Asiapacific MedTech CIO roundtable under the APACMed umbrella to bring CIOs together to collaborate on Industry –wide issues and opportunities. He is also the vice-chair for APACMed Startup committee leadership team. Serves as advisory board member in SMART – Singapore – MIT alliance for research and technology.

Mr. Arun also held multiple global roles **with Merck group, a German Multinational Company on Science and Technologies.**

He won a **global leadership award** for improving the quality of life for **Multiple Sclerosis** patients using digital health solutions.

He was also held business and technology leadership roles at Nike and GM, in all segments from manufacturing to retail management. He did his bachelors in electronics and telecommunication engineering in Tamil Nadu. He is an alumnus of Harvard Business school. He is a perfect example of what an engineer can offer to the field of medicine. The bridge between Engineering and medicine is narrowing and it should be connected to improve life quality of all of us and our future generations. With this say; I welcome our honorable dean to address the audience.

Post speaker introduction; Mr. Arun Sethuraman, delivered his talk. The session was highly informative and interactive; he presented the case study and asked questions from it; IIC – student member named Ms. Vengamma answered brilliantly and got applause from the all in the auditorium including the guest speaker. For same problem, Dr. Chinni Suneel, Professor and IIC- staff member answered in a different perspective which was also much appreciated by audience. The PPTs of Mr. Arun' talk can be found below. His talk on building innovation created much interest among the staff and student members, many questions were asked even after the session. The dental staff members, had a round table discussion for more than hour with the guest speaker; they were requesting his inputs in inventing non-invasive devices to address the problems they face in their dental practices. For example, a healthy discussion was done on the need to innovate a non-invasive device to predict gingivitis prior it adversely affects the gums and bones in school children; can be a simple tool that can be used in prevalence studies. Another issue is the insertion of intubation tube in Trauma cases in Emergency; the dental doctor explained the difficulty in inserting the guiding wire and intubation tube in trauma cases with minimal or no damage to the wind pipe to provide anesthesia to do the surgery. Similarly, other dental issues was discussed and requested Mr. Arun to come up with innovative devices to help patients in the clinics. Mr. Arun's PPT's are given below.



NARAYANA

Professional Colleges – Medical, Dental, Nursing, Pharmacy & Physiotherapy



**INSTITUTION'S
INNOVATION
COUNCIL**

(Ministry of Education Initiative)

Institution's Innovation Council

Session on Building an Innovation/Product Fit for Market

Thursday 19th August, 2021, 11 am at

Guest Speaker

Mr. Arun Sethuraman,

(General Management Program, Harvard Business School, USA)

Founder and Chief Executive Officer, Crely Healthcare Private

Limited, Singapore.

Credits to all trademark and copyright holders for the images used in this presentation

**Who is your “real” customer
&
How to reach them?**



You have a
“job-to-do”



**We have
a solution**



You have a
“job-to-do”



We have a
solution



You are
willing & able
to pay



Waterman Hemisphere Fountain Pen Medium Nib with Blue Ink Cartridge (2042966)

by Waterman

★★★★★ 144 ratings

Price: **S\$36.65**

New (2) from **S\$36.65** FREE Delivery on first order.

Colour Name: **Bright Blue**



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Ballpoint Pen

Fountain Pen

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- Presented in a Premium dark blue Waterman gift box

S\$36.65

FREE delivery: **Tuesday, 9 March** on first order.

Fastest delivery: **Tomorrow**
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Only 3 left in stock.

Quantity:

 **Add to Cart**

 **Buy Now**

 **Secure transaction**

Ships from **Amazon SG**

Sold by **Amazon SG**

Add a gift receipt for easy returns

Add to Wish List

In this case your customer

- Has the need
- Communicates the need
- Decides that your product would satisfy the need
- Knows how to use the product
- Has the skill and ability to use the product
- Has the willingness & ability to pay
- Makes the decision to purchase the product
- Transacts with you through your channels
- Benefits from using the product

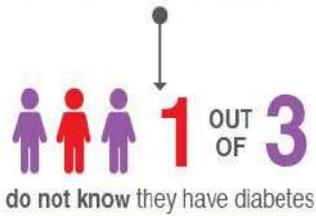
You have
a
“job-to-do”



AS OF 2015

541,600

Diabetics in Singapore



By 2050 IT IS ESTIMATED

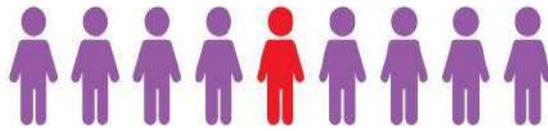
1 Million

Singaporeans could be affected by diabetes

TODAY

1 IN 3

aged 65 and above has diabetes



That's about 1 out of every 9 people living with diabetes

There is a
1 IN 3
CHANCE
you will get diabetes in your lifetime

3,815.3
deaths (adults) in Singapore are linked to diabetes in 2015

OTHER COMPLICATIONS

- Blindness
- Kidney Failure
- Heart Attack
- Stroke
- Amputation

Statistics taken from Ministry of Health Singapore and International Diabetes Federation. All information is correct at time of printing



VS





VS



Wirelessly connect with the OneTouch Verio Flex meter



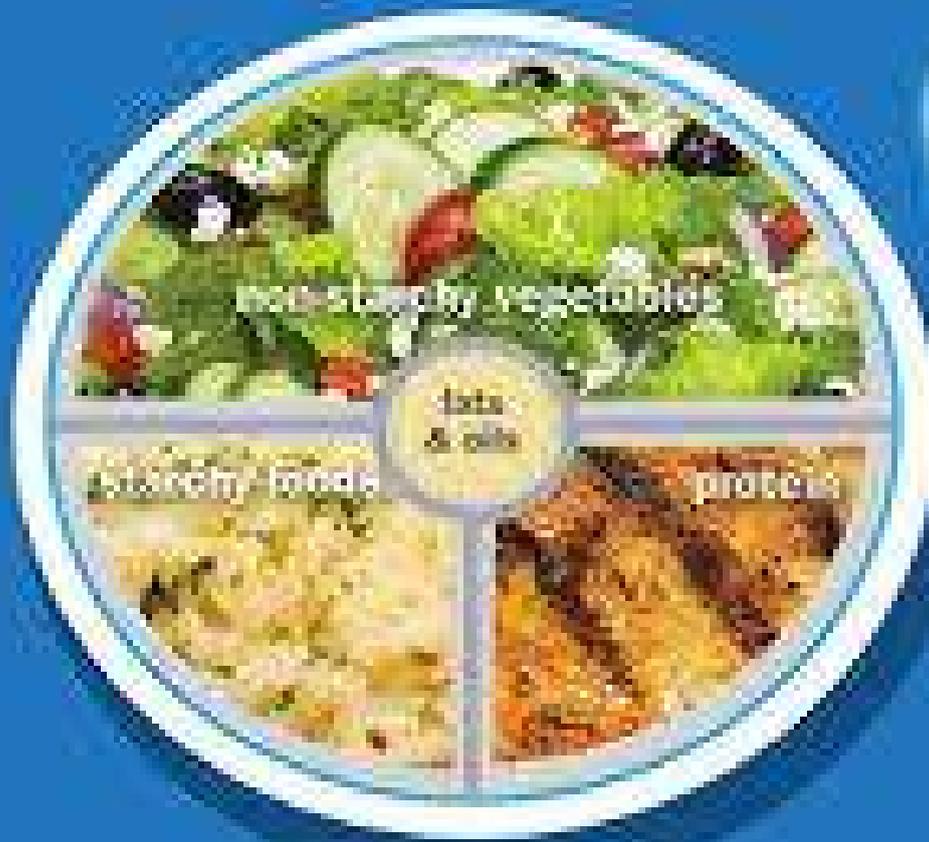
14, 30 and 90-day summaries highlight blood glucose patterns



Simple color-coded trends to help you get more meaning out of your results



diabetes portion plate



add a
8oz. glass
of non-fat or
low-fat milk



add a piece of fruit or a
1/2 cup of fruit salad

What to Pack When Traveling With Diabetes

medical identification

medications (pills, insulin, etc.)

Lancing device and extra lancets

test strips

glucose meter

glucagon emergency kit

fast-acting glucose

insulin delivery device

extra batteries

verywell



DIABETES EMERGENCY KIT



Batteries



Testing strips



Monitoring device



Insulated/
waterproof bag



Alcohol
prep wipes



Soap

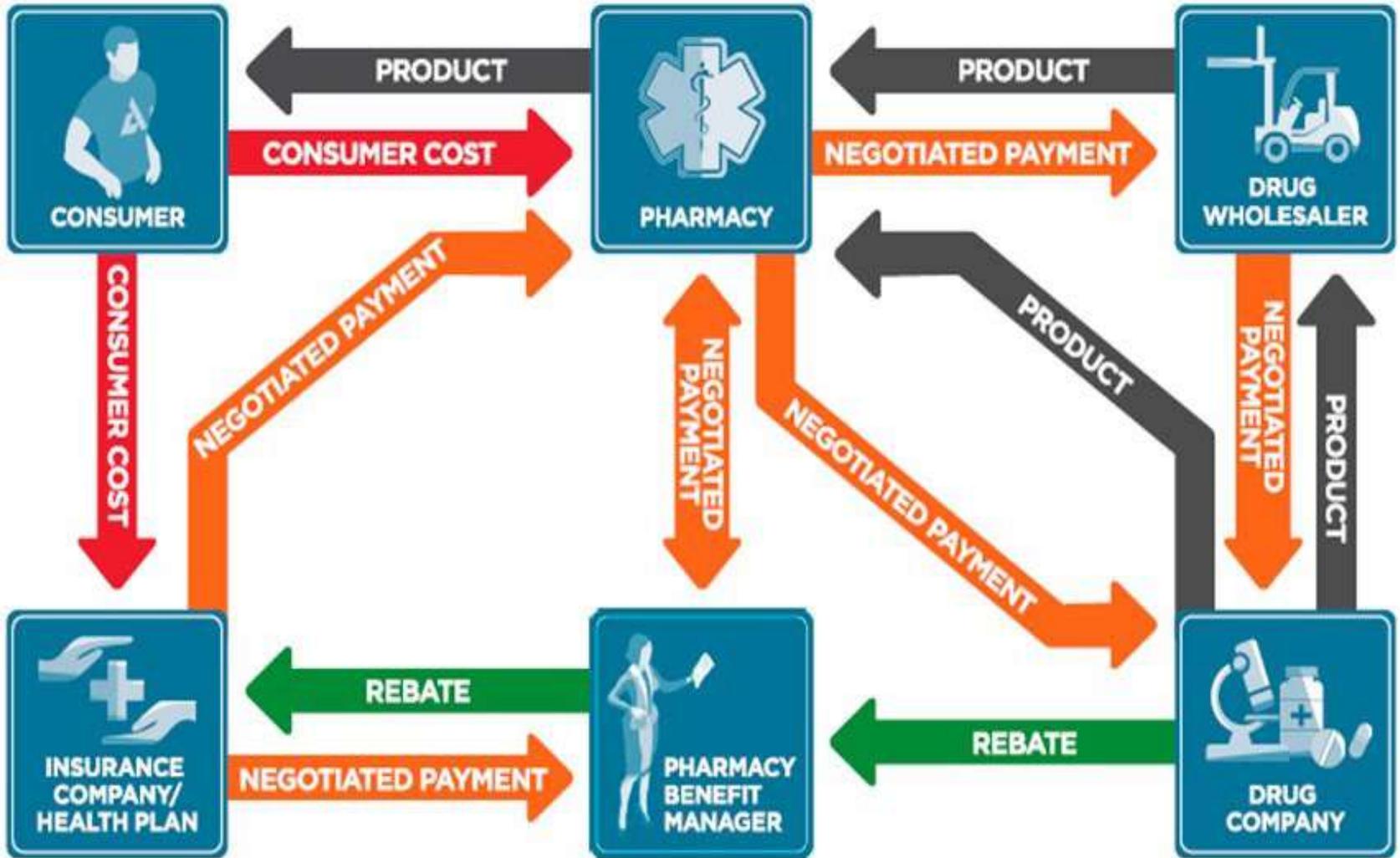


Emergency
snack



Emergency info/
medical list

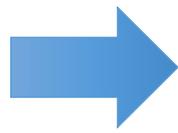
Insulin Supply Chain: A Complex System



In this case who has/does what?

- Has the need
- Communicates the need
- Requires a consultation with a subject matter expert
- Decides that your product would satisfy the need
- Knows how to use the product
- Has the skill and ability to use the product
- Has the willingness & ability to pay
- Makes the decision to purchase the product
- Transacts with you through your channels
- Benefits from using the product

Who is your
Customer



Who are all your
stakeholders?

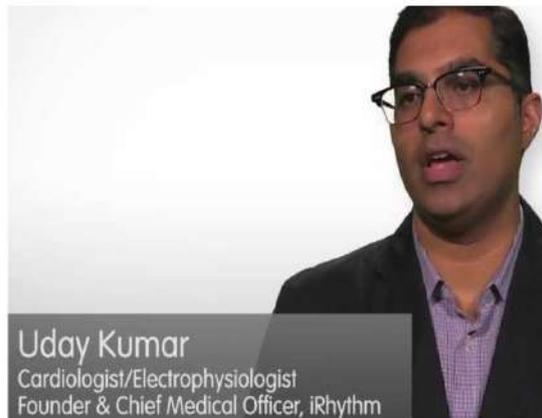


BIODESIGN

The Process of Innovating Medical Technologies



2.3 Stakeholder Analysis



Uday Kumar
Cardiologist/Electrophysiologist
Founder & Chief Medical Officer, iRhythm

ATRIAL FIBRILLATION: THE STAKEHOLDER LANDSCAPE

Uday Kumar, founder and Chief Medical Officer of iRhythm,



Bill Chisholm
AF Patient

ATRIAL FIBRILLATION: PATIENT 1'S EXPERIENCE

Atrial fibrillation patient Bill Chisholm shares his AF diagnosis and treatment experience, as well as his wish list for future innovations in the disease area.

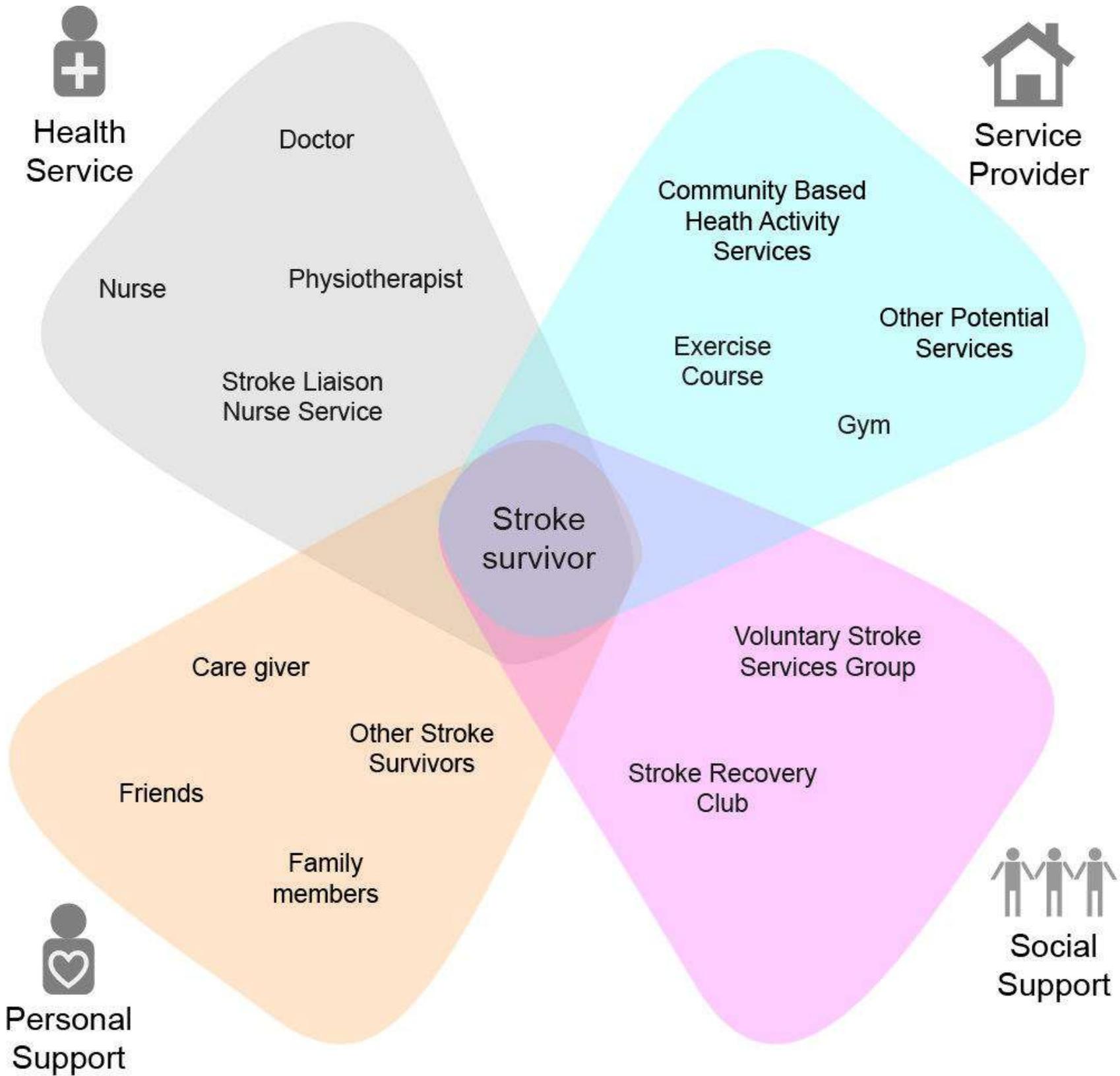


Paul Wang
Director, Stanford Cardiac
Electrophysiology & Arrhythmia Service

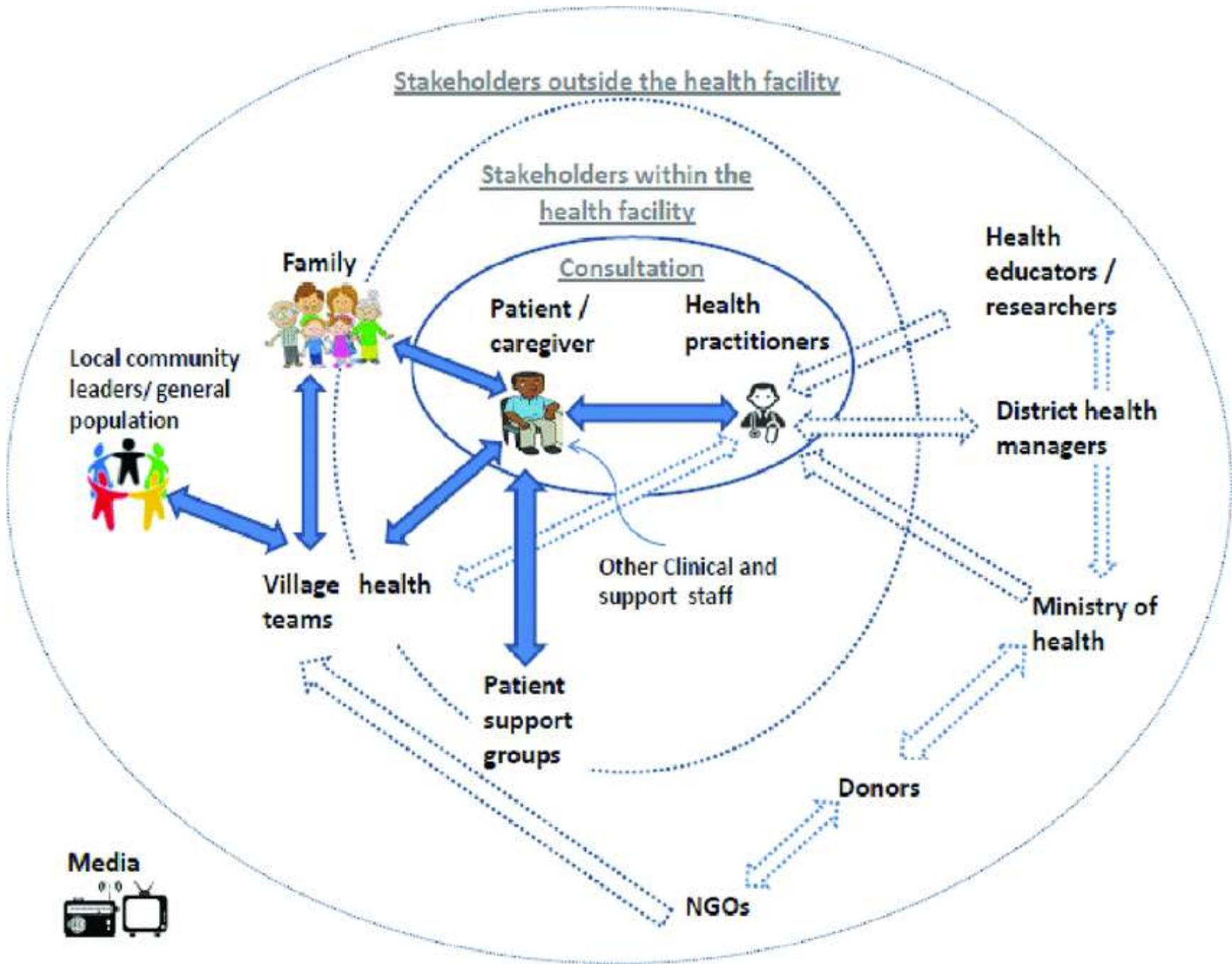
ATRIAL FIBRILLATION: PHYSICIAN'S OVERVIEW OF THE NEED AREA

Dr. Paul Wang, an arrhythmia specialist, discusses atrial

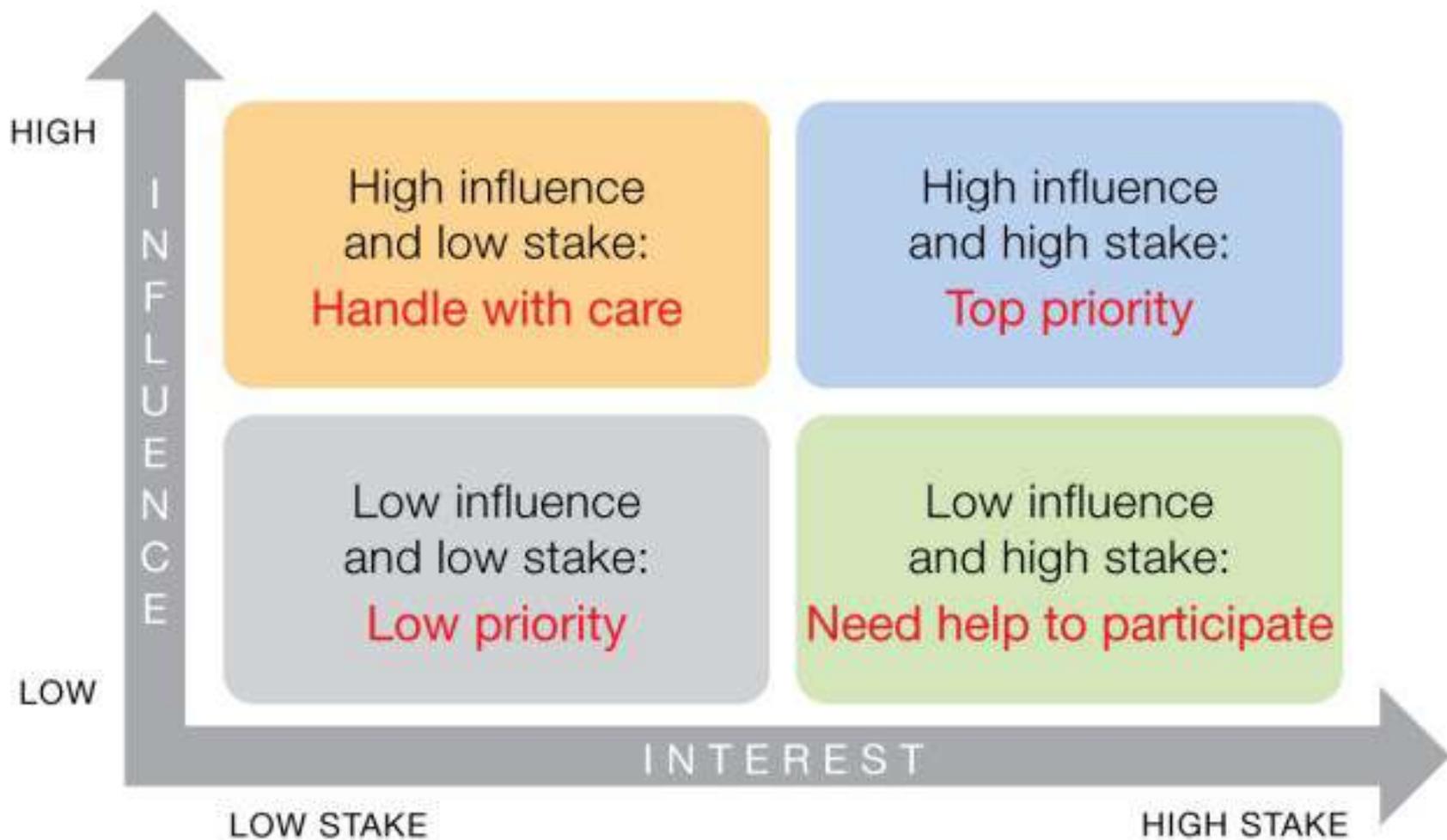
Example of a stakeholder map.



Example of a stakeholder map



Stakeholder stake & impact analysis

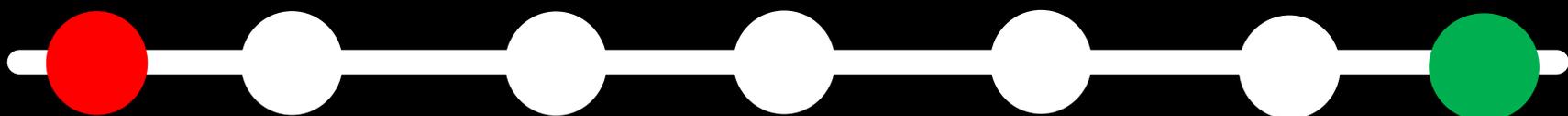


Case Study

An uneventful patient journey

Pain,
Loss of function,
Threat to life ...

Positive
Outcomes



Pre-operative
preparation

Hospital
admission

Surgery

Discharge
to home

Post-operative
recovery

Surgical Site Infections (SSI) are the #1 cause for unplanned hospital readmissions

~310 million surgeries worldwide annually	>1 million SSI cases annually	SSIs are ~38% of all healthcare acquired infections
>\$30 bil in wasted healthcare spend due to SSIs	Mortality rate ~3% of all SSIs cases	Loss of profitability for a hospital up to \$22,239 per SSI case

Sources: WHO, CDC, The Lancet, Johns Hopkins University



We found that 2000 years on, clinicians still rely on actual physical observation of the surgical wound to determine if an infection is present

Problem #1:

Symptoms and signs of infection are the same as the 'normal' recovery; detection is usually only possible when the infection is firmly established, such as pus within a wound

Problem #2:

Infection may be present but not show any outward clinical signs and thus would be missed

Problem #3:

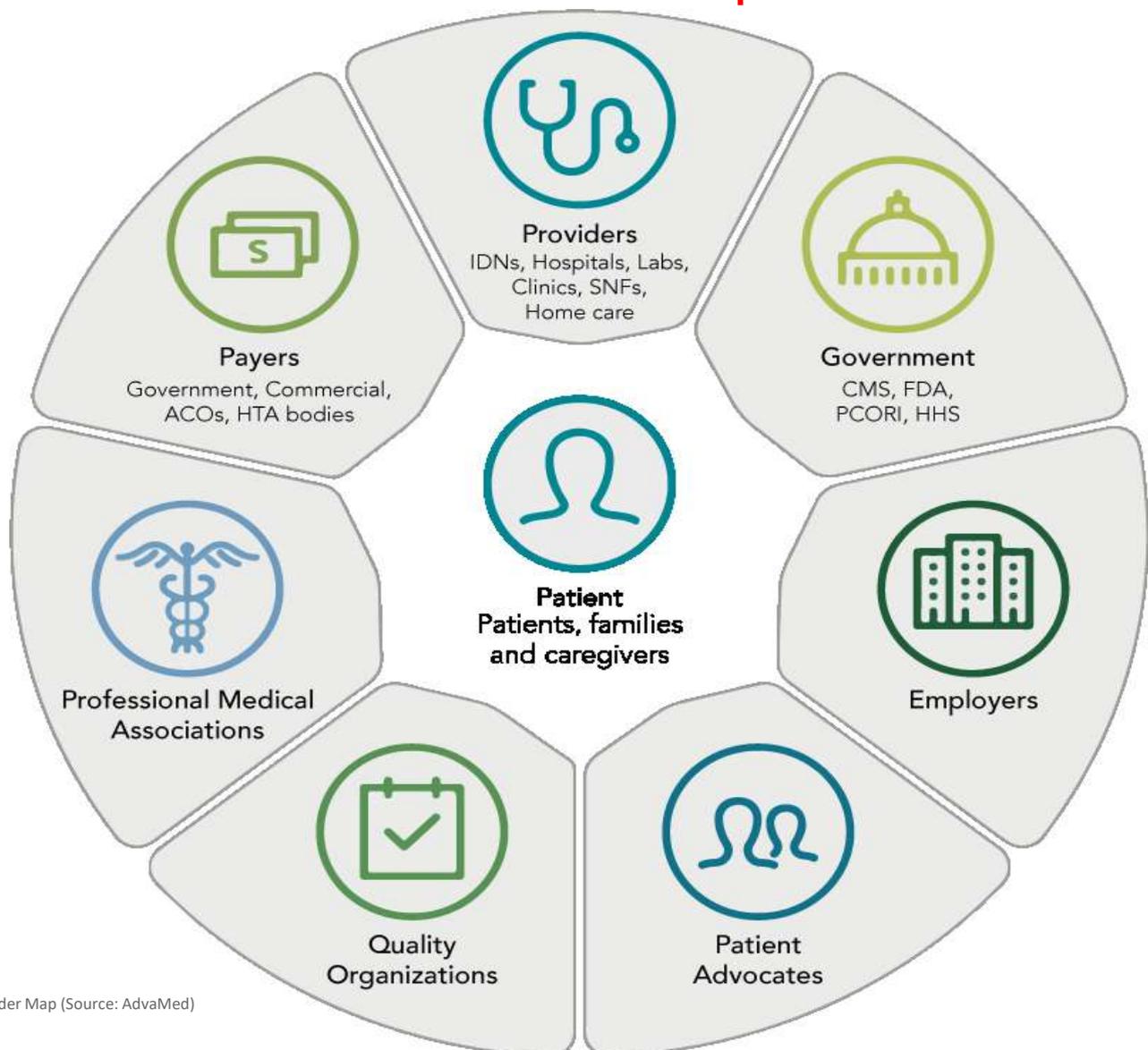
Just a 45 hour delay (say, from Friday night to Monday morning) in treatment of SSI increases odds by 3.8x of infection-related deaths

There is a huge unmet need for a credible and reliable post-operative wound monitoring, and an early warning system for surgical site infections.

Exercise

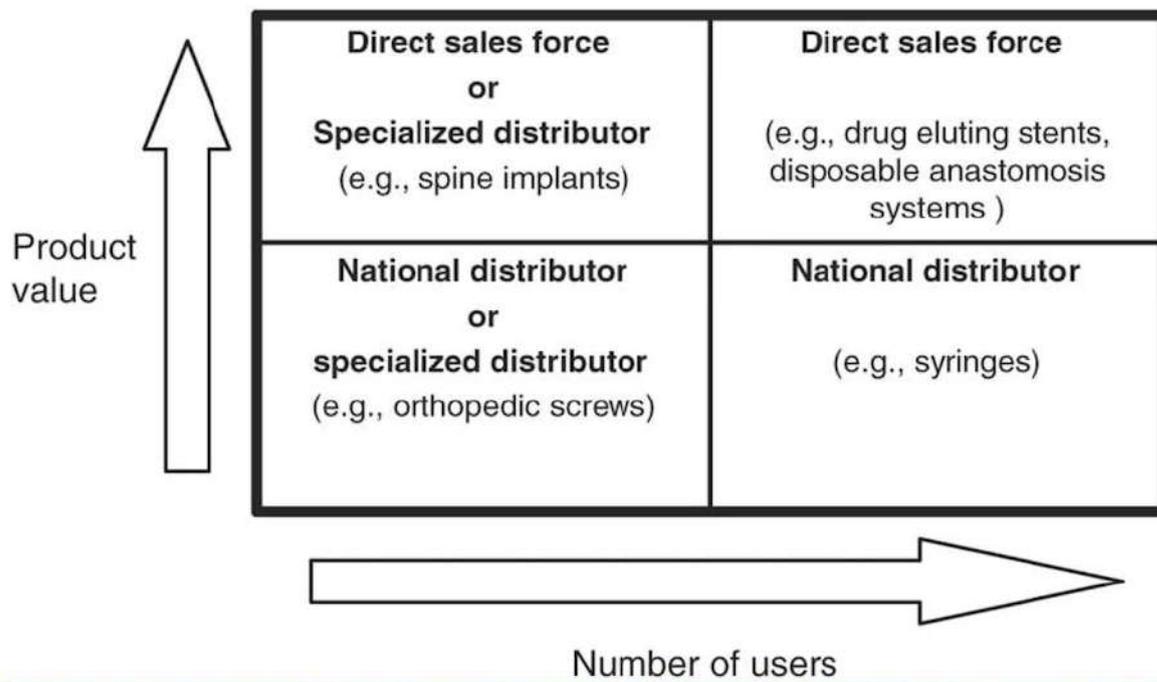
Use the stakeholder map & work in pairs for 5 min.

- Who is your customer?
- What is the product?
- Who makes the decision to use your product?
- Who uses it?
- Who pays for it?
- Who gets what?
- What is the value equation?



**How to
reach your
customer :**

Sales Force Models & Product Attributes



Adapted from the Stanford Bidesign Program Content 2010

Go-To-Market Options

Building blocks

Range of options

1 Product type

Reduce price on existing products

Reposition end-of-life-cycle products

"De-engineer" premium products

Build new low-cost products from scratch

2 Operational support model

High-level support (eg, rapid response, just-in-time inventory management, flexible shipment terms)

Low-level support (eg, long lead time, no consignment stock, charging for freight, minimum shipment sizes)

3 Sales model

Fully loaded sales force (as for premium)

Lower-cost sales force

Indirect channel (distributors)

Low-cost channel (digital)

4 Clinical support and services

Field-based support and training

Non-field-based support and training

No clinical support

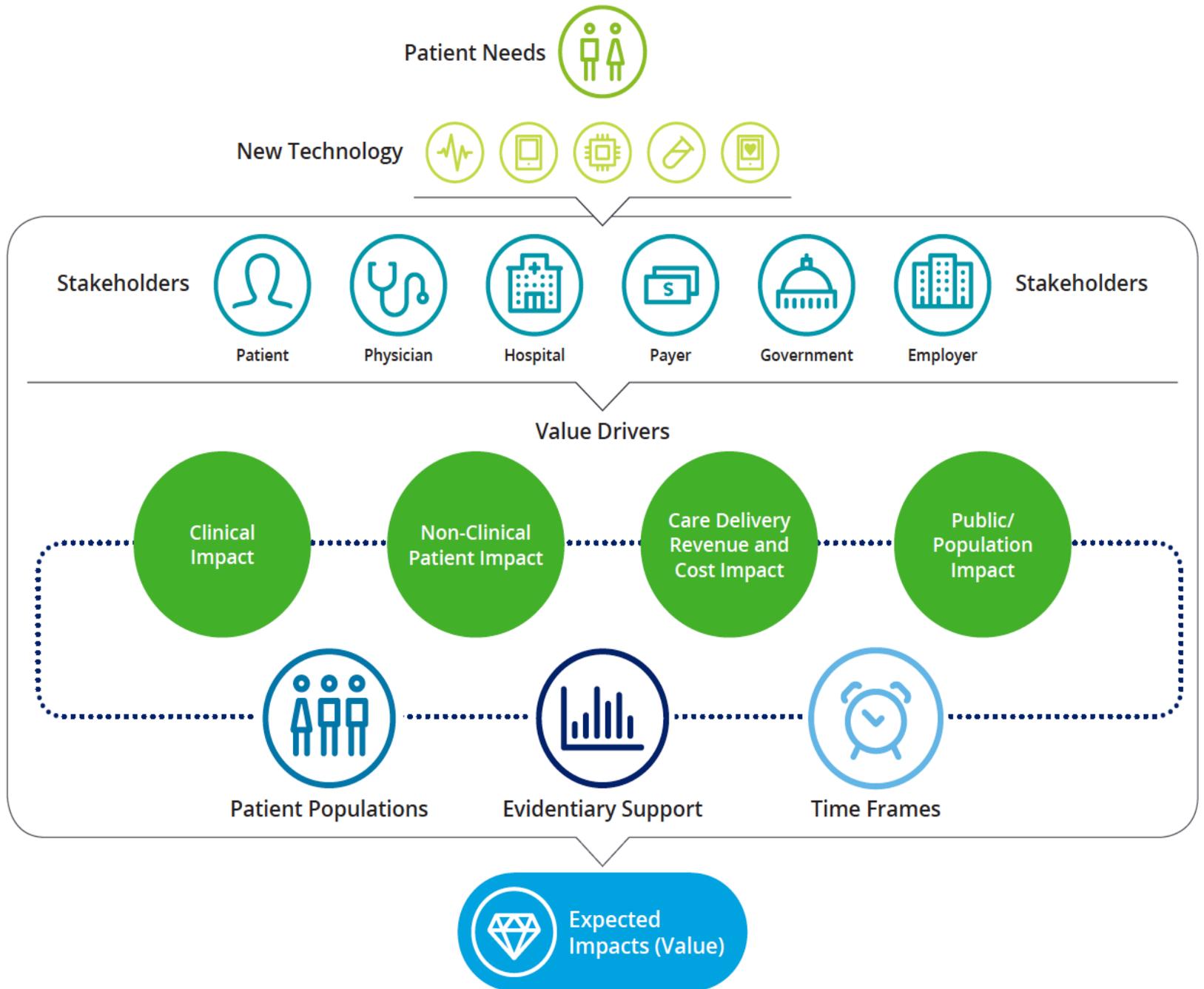
5 Brand name

Use existing brand name

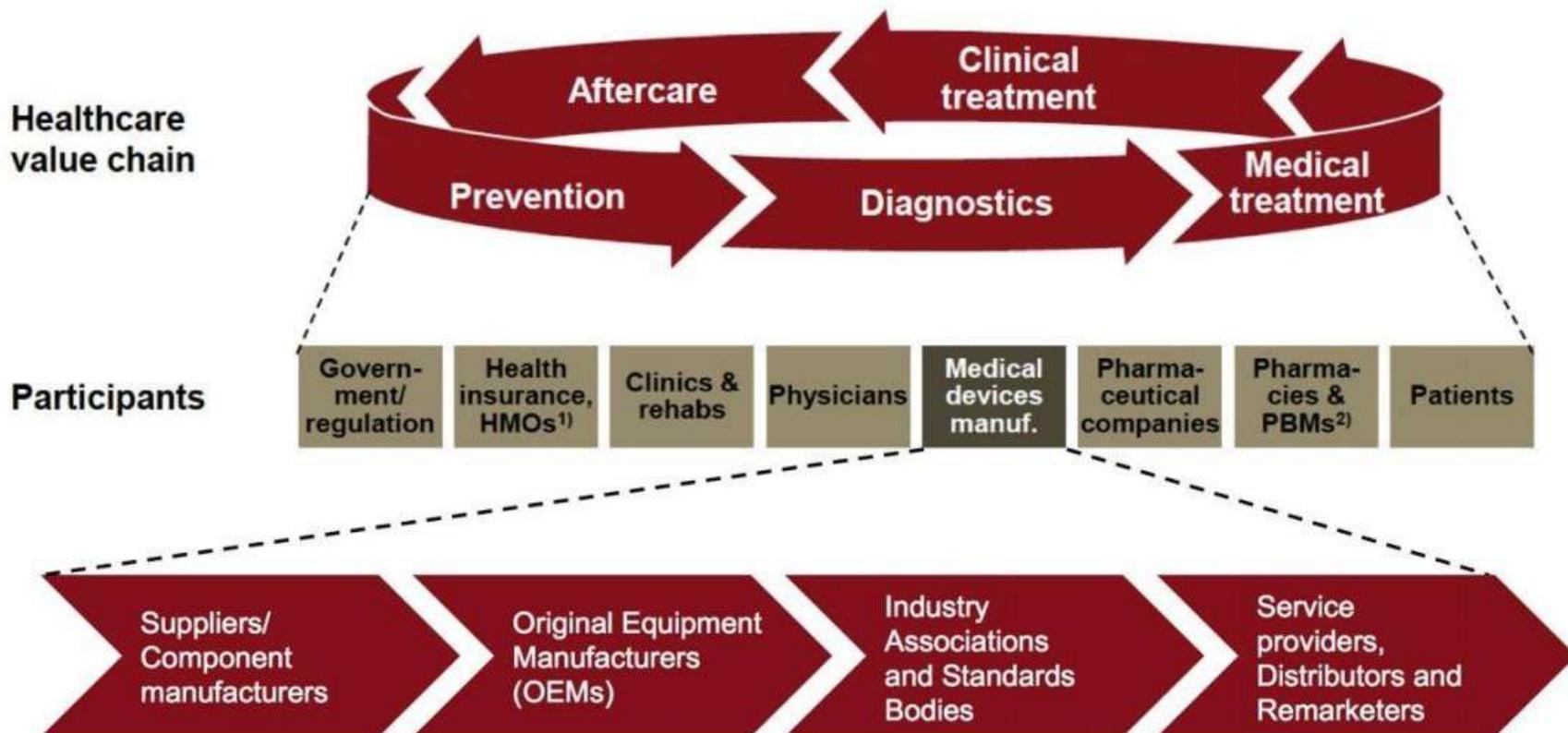
Use endorsed brand name

Adopt new brand name

How do you get paid?



What is the value chain?



Summary

- Complex stakeholder relationships in the MedTech industry
 - Develop a deeper understanding of the pain points and who does what
 - Carefully orchestrate every interaction between your stakeholders
- Engage all relevant stakeholders early in your commercialization journey
- Sales, Distribution & Service strategy is very important to succeed in your target market

Sample Certificate given to participants



Narayana Medical College
Nellore, Andhra Pradesh, India.



CERTIFICATE

This Certificate is Proudly Presented to Dr/Mr/Mrs/Ms

Prof. Dr. S. Thirunavukkarasu

For attending the session entitled “Building an Innovation/Product Fit for Market” conducted by Narayana Translational Research and Incubation Centre (NTRIC) & Institution’s Innovation Council on August 19, 2021.

Dr. Sivakumar Vijayaraghavalu
Professor & Head, NTRIC

Dr. Surya Prakash Rao
Professor & Dean



NARAYANA

Professional Colleges – Medical, Dental, Nursing, Pharmacy & Physiotherapy



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on 19th August, 2021, 11 am

at Gray's Lecture Gallery, Narayana Medical College

Guest Speaker – Mr. Arun Sethuraman.



Photo Collage of the event - 1



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