



eHealth for Kidney Patients in HUS – Digital Care Pathways – and more

Nordic Proof Webinar 9.9.2020

Virpi Rauta

Nephrologist, PhD, EMBA

Project Manager, Kidney Hub, Health Village

Project Manager, PI, Clever Health Network eCare for Me Hemodialysis

Background

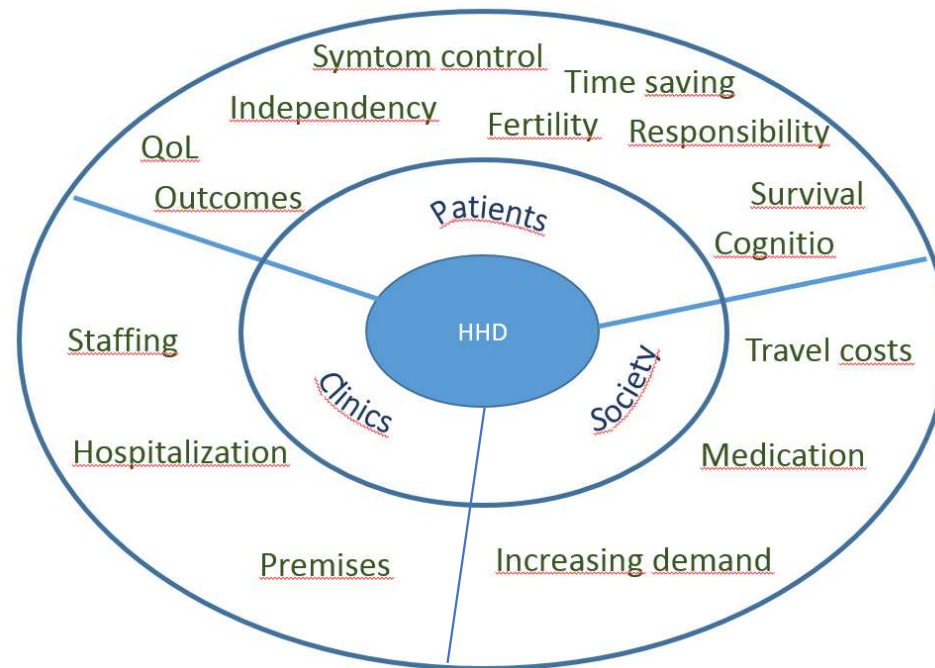
- Chronic kidney failure (CKD) is common in population
- Treatment options for end stage renal disease (ESRD):
 - Kidney transplantation
 - Dialysis
- Dialysis is **most expensive life-supporting, long-lasting care**
 - can be done:
 - in hospital (3x 4-5h/wk)
 - at home (individually)
- Prevalence increasing worldwide (5% per year)



Why Home dialysis...?

Win - Win - Win

- **Treatment** prescriptions can be **individualized** to meet each patients needs
- **Quality of life** for patients is better
- **Outcomes** for patients are better
- **Total costs** are significantly lower







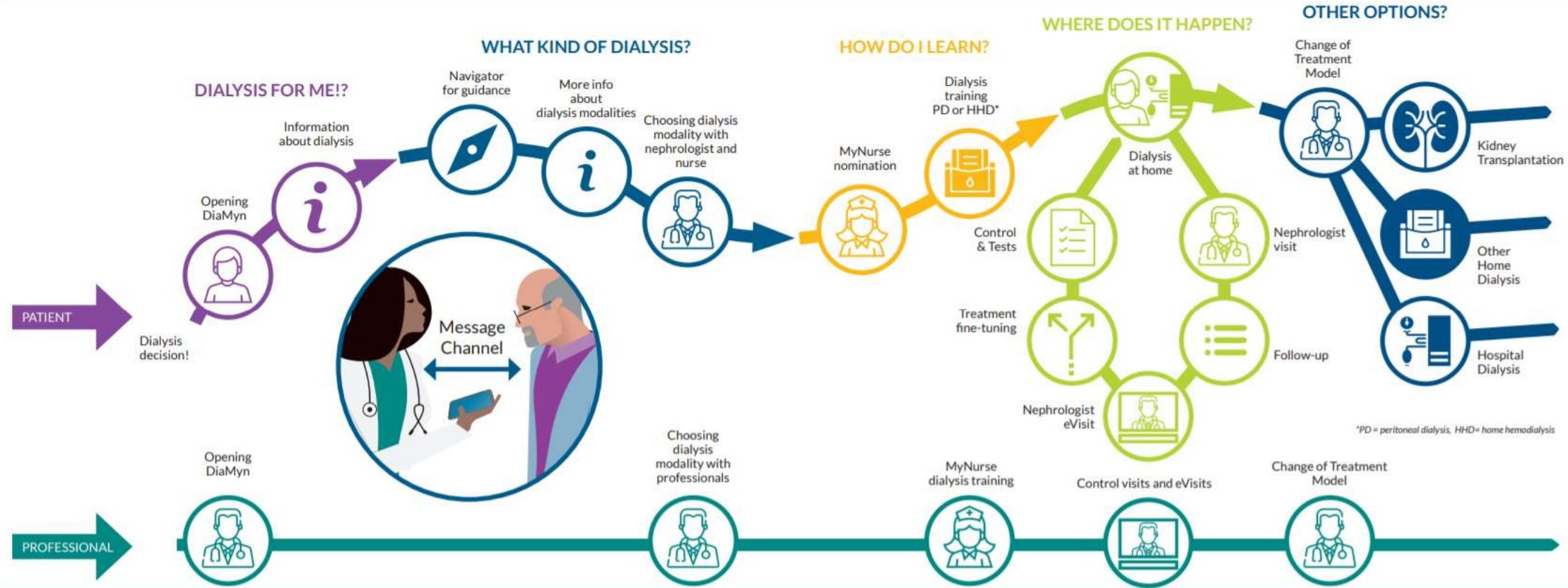
DiaMyn™ —

Digital Dialysis Care Pathways

Digital Health Village

DiaMyn Digital Care Pathways for Home Dialysis Patients

Choosing Dialysis Modality • Peritoneal Dialysis • Home Hemodialysis



- Modernizes treatment processes – less routines, more results.
- Breaks the barriers to home dialysis, supports the home first concept.
- Fulfills the needs of many types of patients.

- Scalable service – serve more patients with the same resources.
- Patients and pros travel less, enhances sustainable development.
- Adaptable to different organizations.

Reducing fears, increasing knowledge

Videos, manuals, navigators, questionnaires...



Peers discussing:

How did it feel when I was told to start dialysis?

How did I cope with it?

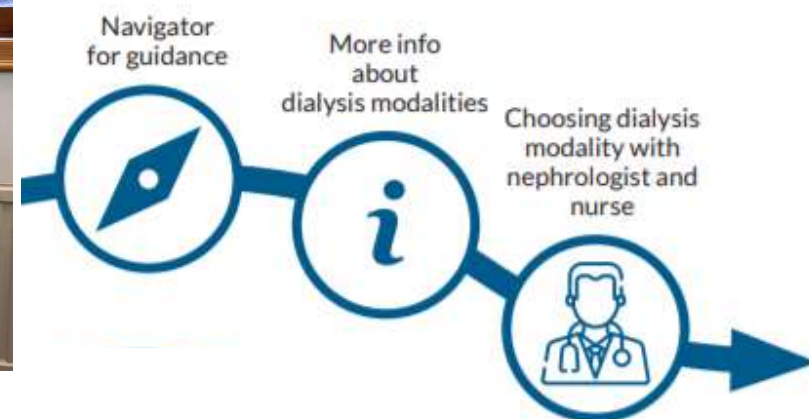
What helped me most?
What did my family think about it?

DIALYSIS FOR ME!?





WHAT KIND OF DIALYSIS?

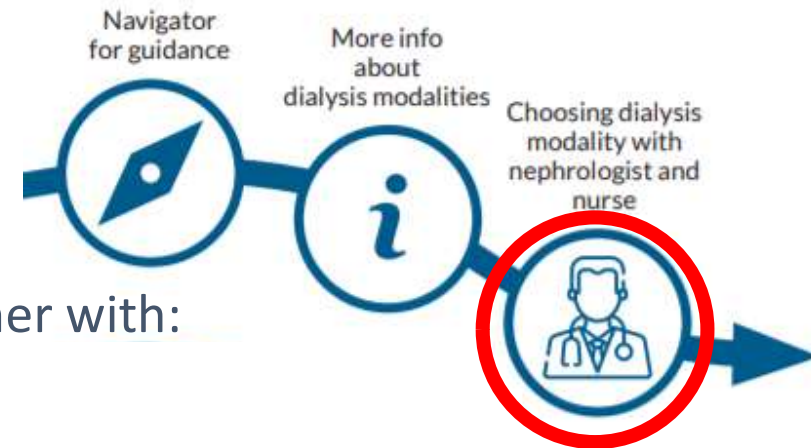


- How does dialysis work?
- Information on:
 - social security related issues
 - care team and support
 - peer support

Choosing dialysis modality with professionals



WHAT KIND OF DIALYSIS?



Dialysis mode **decision** in dialysis modality clinic, together with:

- patients
- patients family
- home dialysis nephrologist
- home dialysis nurse

Patients are better informed and more ready to make the decision



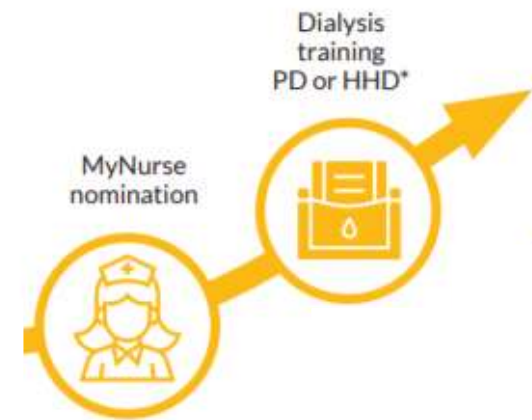
Patients who have made **home dialysis** decision stay in DiaMyn™ care path, and are followed by the home dialysis team:

Home dialysis training is started in predialysis phase in DiaMyn:

Reducing fear:

- am I able to learn?
- what does the care team expect from me in training period?

HOW DO I LEARN?



MyNurse
dialysis training

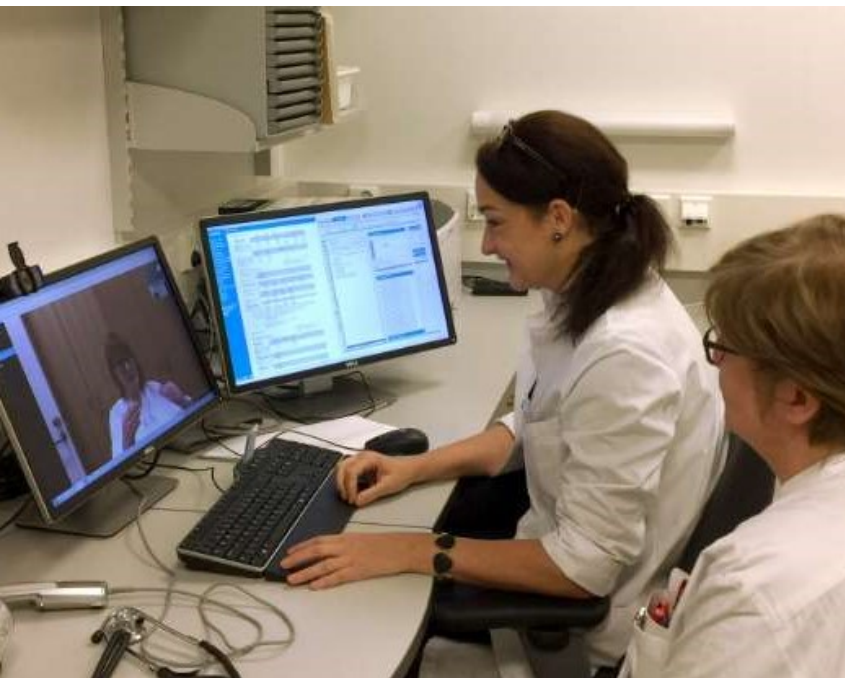


Step by step manuals and videos

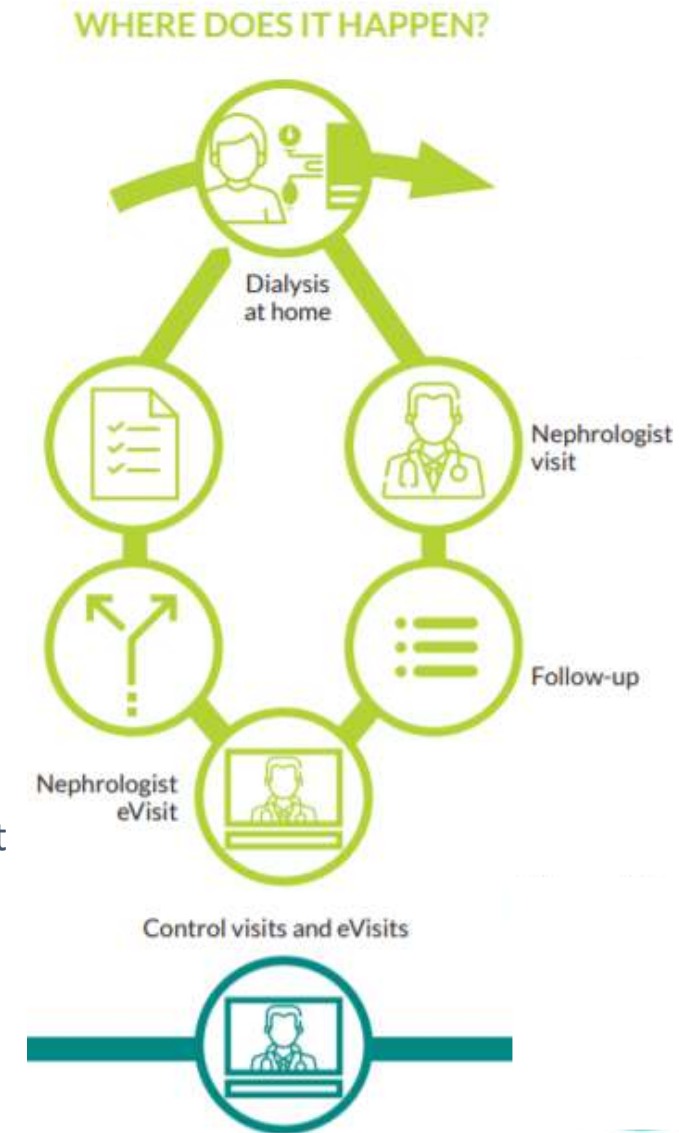


Pictures and text
of every single
step of the
treatment























































Patients at home dialysis



- videovisits
- communication channel
- questionnaires (symptoms, QoL...)
- information on:
 - travelling as a dialysis patient
 - nutrition
 - how to adjust and change dialysis prescription
 - exercise
 - psychological and peer support
 - etc...



Patient listings and dashboards for professionals

[Redacted] 010180-4974 1	31.10.2020	Odottaa			  
[Redacted] 1	31.12.2019	Odottaa	1.4		  
[Redacted] 011140-5000 1	02.12.2019	Odottaa	2.2		  
[Redacted] 081159-1420 1	28.12.2019	Odottaa		PD+KHD	  
[Redacted] 08020-276X 1	02.12.2019	Odottaa	6.3	PD+KHD	  
[Redacted] 1	31.12.2019	Odottaa	2.4		  
[Redacted] 00060-479X 1	31.12.2019	Odottaa	1.5		  
[Redacted] 00040-459E 1	10.09.2019	Odottaa	6.3	KHD	  
[Redacted] 14037-538b 1	07.12.2019	Odottaa	1.4	SHD	  
[Redacted] 1	31.12.2019	Odottaa		PD	  
[Redacted] 00007-148U 1	01.01.2027	Odottaa			  
[Redacted] 1	31.12.2019	Odottaa	1.5		  
[Redacted] 00000-200 1	31.12.2019	Odottaa	0	KHD	  
[Redacted] 00000-05C 1	30.12.2019	Odottaa	1.5	KHD	  
[Redacted] 00000-00W 1	01.01.2020	Odottaa	0	SHD	  
[Redacted] 1	30.09.2019	Odottaa	6.3	KHD	  
[Redacted] 00007-00W 1	08.12.2019	Odottaa	2.4	KHD	  
[Redacted] 00000-000 1	02.09.2019	Odottaa	6.3	KHD SHD	  



KOTI



TREATMENT PATH



MESSAGES



CALENDAR



SYMPTON DIARY



GROUP CHAT



FAQ



MONITORING

Treatment path



1.2

✓ HOW PREPARED AM I TO BEGIN DIALYSIS?

Suoritettu 10.02.2020



1.3

✓ 1.3. IS DIALYSIS FOR ME?

Suoritettu 10.02.2020



1.4

✓ QUESTIONNAIRE: HELPING YOU CHOOSE A MODE OF DIALYSIS TREATMENT

Suoritettu 10.02.2020



1.5

CONTACT INFORMATION

WHAT TREATMENT OPTIONS ARE AVAILABLE FOR KIDNEY FAILURE?

What treatment options are available for kidney failure?

Late-stage kidney failure can be treated through dialysis and a kidney transplant. It is sometimes possible to manage the symptoms of kidney failure with medication. This option is chosen when dialysis treatment or kidney transplant is deemed to pose too great a risk to the patient.

Factors affecting the mode of treatment chosen for kidney failure include any other illness you may have, your general state of health, and your functional capacity.

The following video will show you which forms of dialysis are available.

It is also a good idea to familiarise yourself with the Frequently Asked Questions (FAQ) section. There, you may find answers to some of the questions you might have before attending the treatment selection clinic.

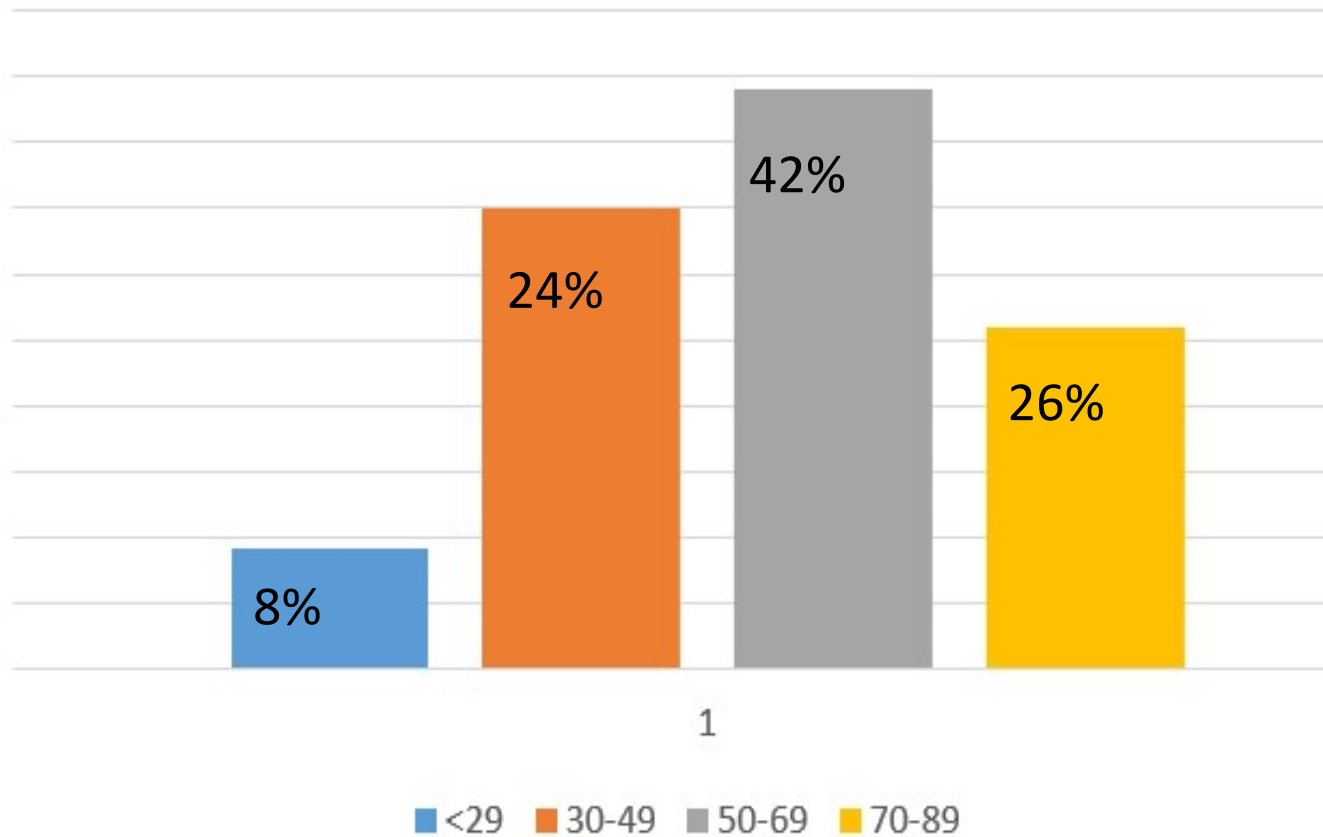
The *Kidneyhouse* microsite contains some reliable and useful general information about kidney disease. The link at the top of the page will lead you to more information on chronic kidney diseases and their treatment.



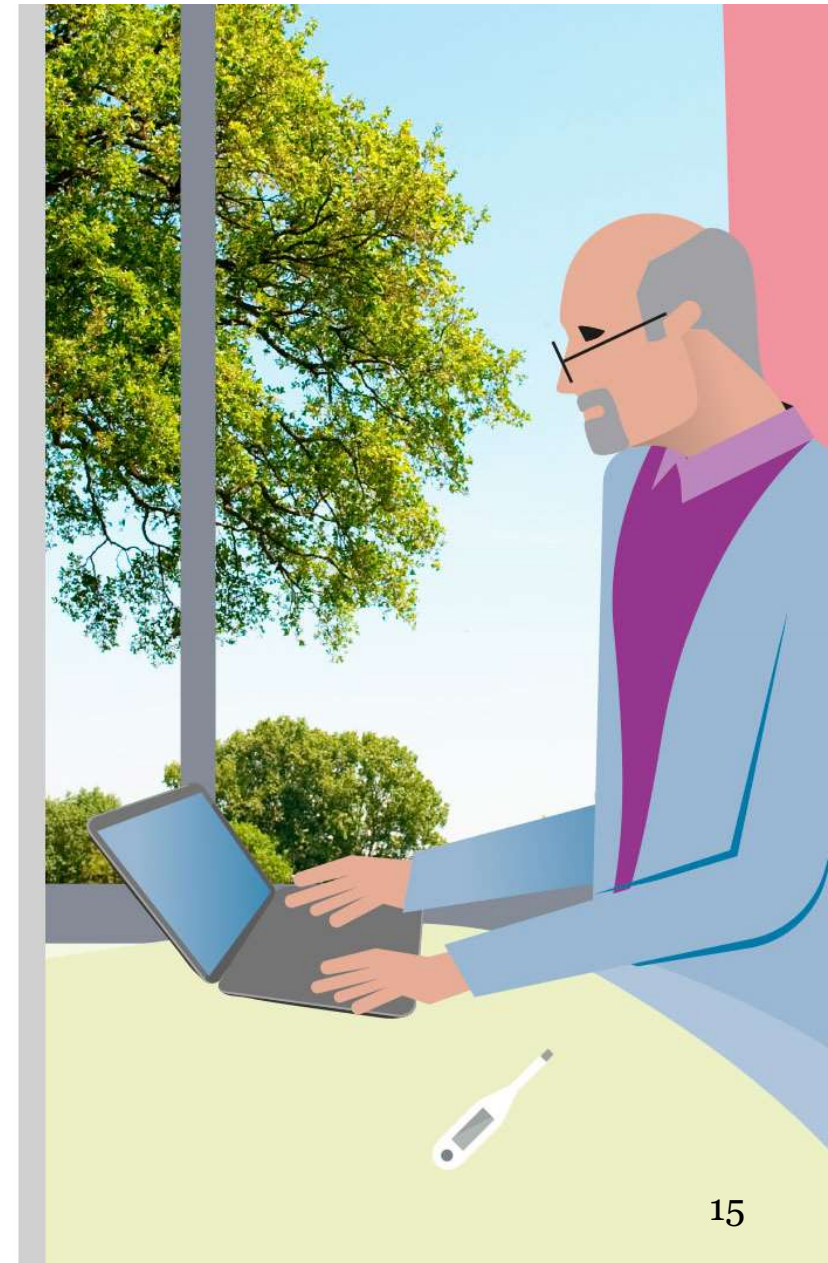
Easy to navigate and find the information needed

when ever where ever

DiaMyn users by age groups



■ <29 ■ 30-49 ■ 50-69 ■ 70-89



DiaMyn, patient satisfaction query

DiaMyn in clinical practice from 12/2018 in HUS
8/2019: 131 patients having a customer account
feedback from 45% of the patients

"Clear, logical,
complete!"

"I can browse
contents whenever I
have time, 24/7"

"I can trust that
information is
reliable"

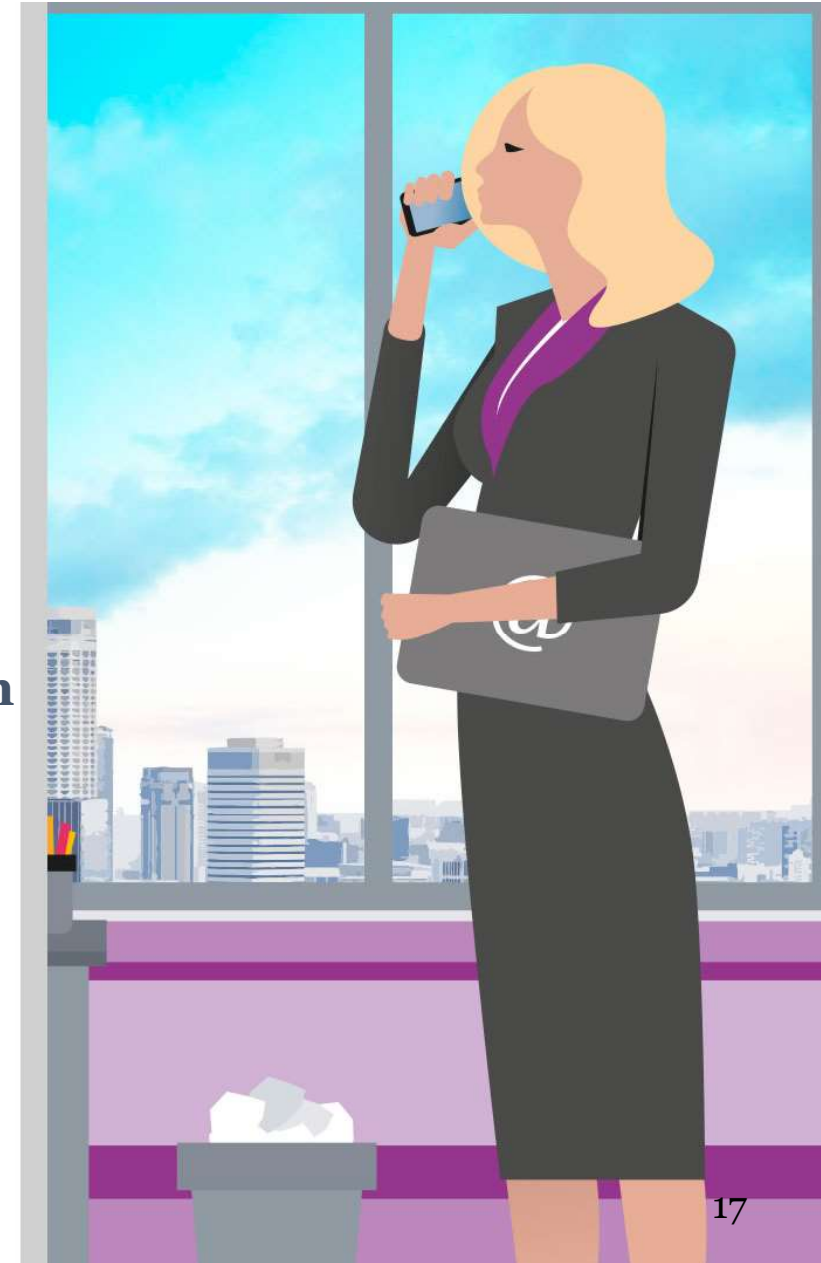
"Everything I need
in one place!"

"Brilliant
idea!"

"Easy to use,
understandable"

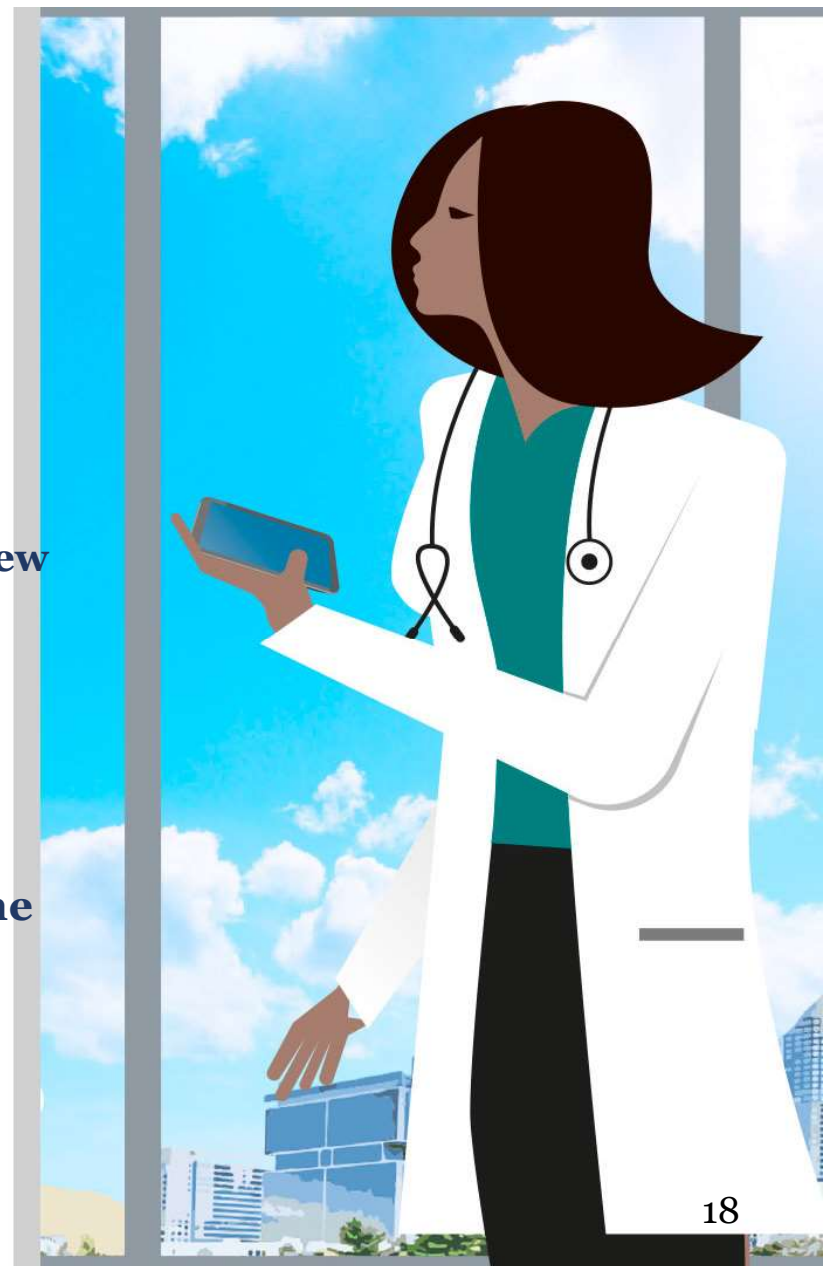
Digital care path: benefits for the patients

- ✓ **24/7** access to care pathways and all the material
- ✓ **Possibility to share material with family members**
- ✓ A coherent information package that professionals can customize as necessary
- ✓ **Training for home therapies can start already in predialysis phase:** more time to adapt information
- ✓ Possibility **to go back to information, repeatedly,** if needed: **pre-training and re-training**
- ✓ Safe **communication channel** with the care team
- ✓ Remote **videovisits**



Benefits for the professionals and organization

- ✓ **Structured model for increasing the proportion of homedialysis**
 - everything needed in one place
 - training material not only for the patients, but also for new employees: "homedialysis information bank"**
- ✓ Easier patient education – better quality
- ✓ **Freeing healthcare staff from routine work:** no more printing, less phone calls
- ✓ Dashboards and patient listings: **improved overall view of the patients**
- ✓ Secured, safe **communication channel** with the patients
- ✓ Questionnaires and navigators give **more information**
- ✓ Remote **videovisits**



Benefits to organization

- Freeing healthcare staff from low-value work
- Model for increasing the proportion of homedialysis
- Shorter and safer training periods
- Better patient safety, lower risks, less hospitalizations



DiaMyn Kidney Hub, Health Village

Complete patient information material in one place

Quality and reliability: Nephrological solution by the University Clinic, together with patients

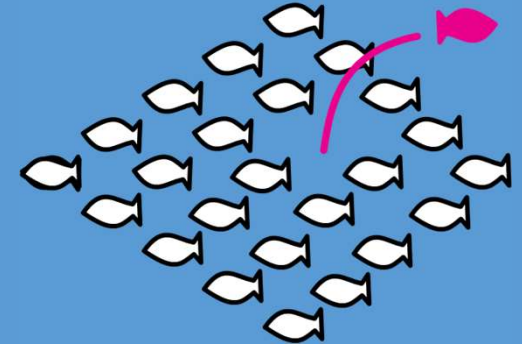
Reducing barriers for home therapies
- Based on Home First model

Scalable and customizable

Educating patients with digital applications

Renewal of operations with digital tools

• How is this different?



DiaMyn is commercialized and available –

and there is yet more to come:

- Other Digital Care Pathways for Kidney Patients
 - In Center HD Pathway
 - Living kidney donor Pathway
- Upcoming Digital Care Pathways for kidney patients:
 - Pre transplantation Pathway
 - Post transplantation Pathway

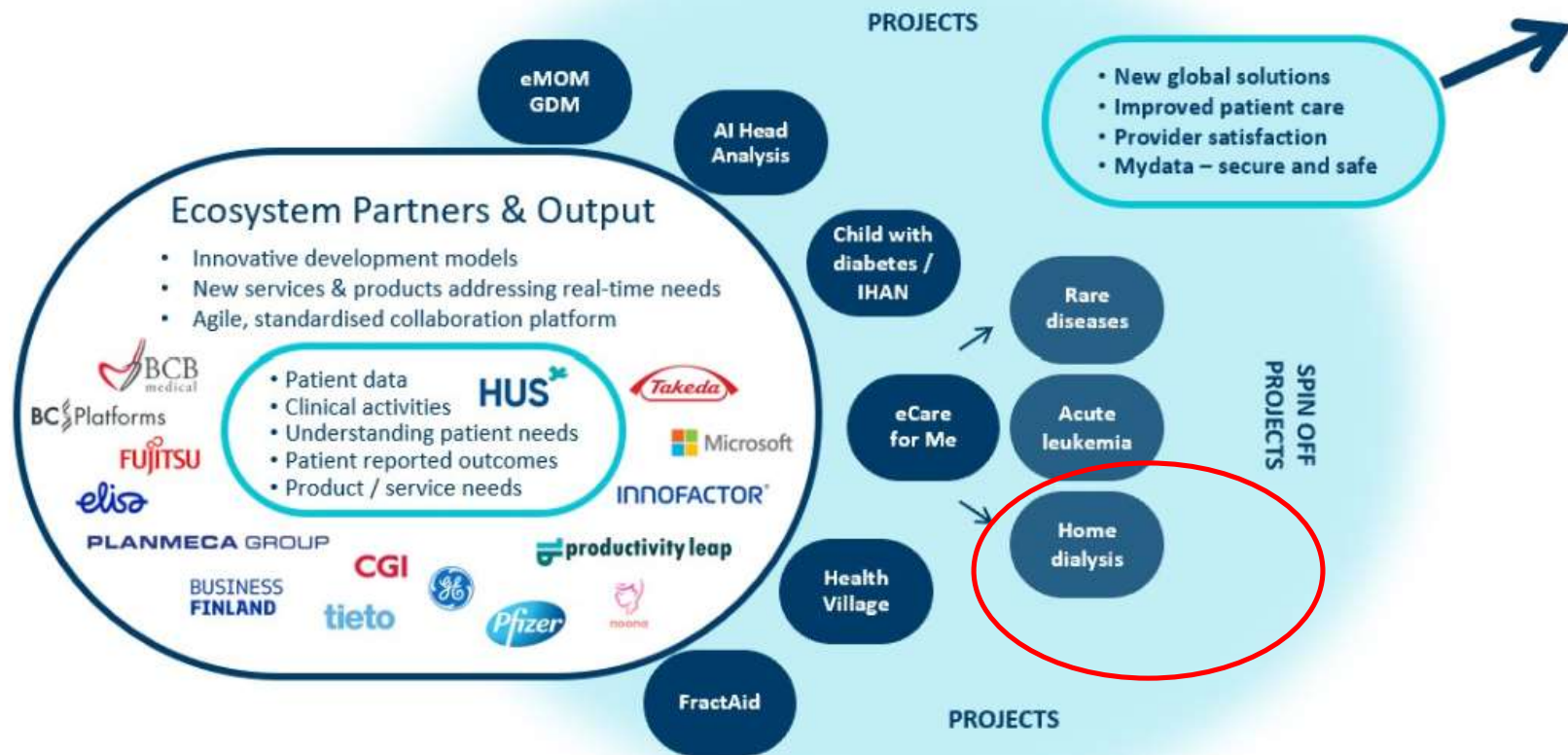


CleverHealth Network

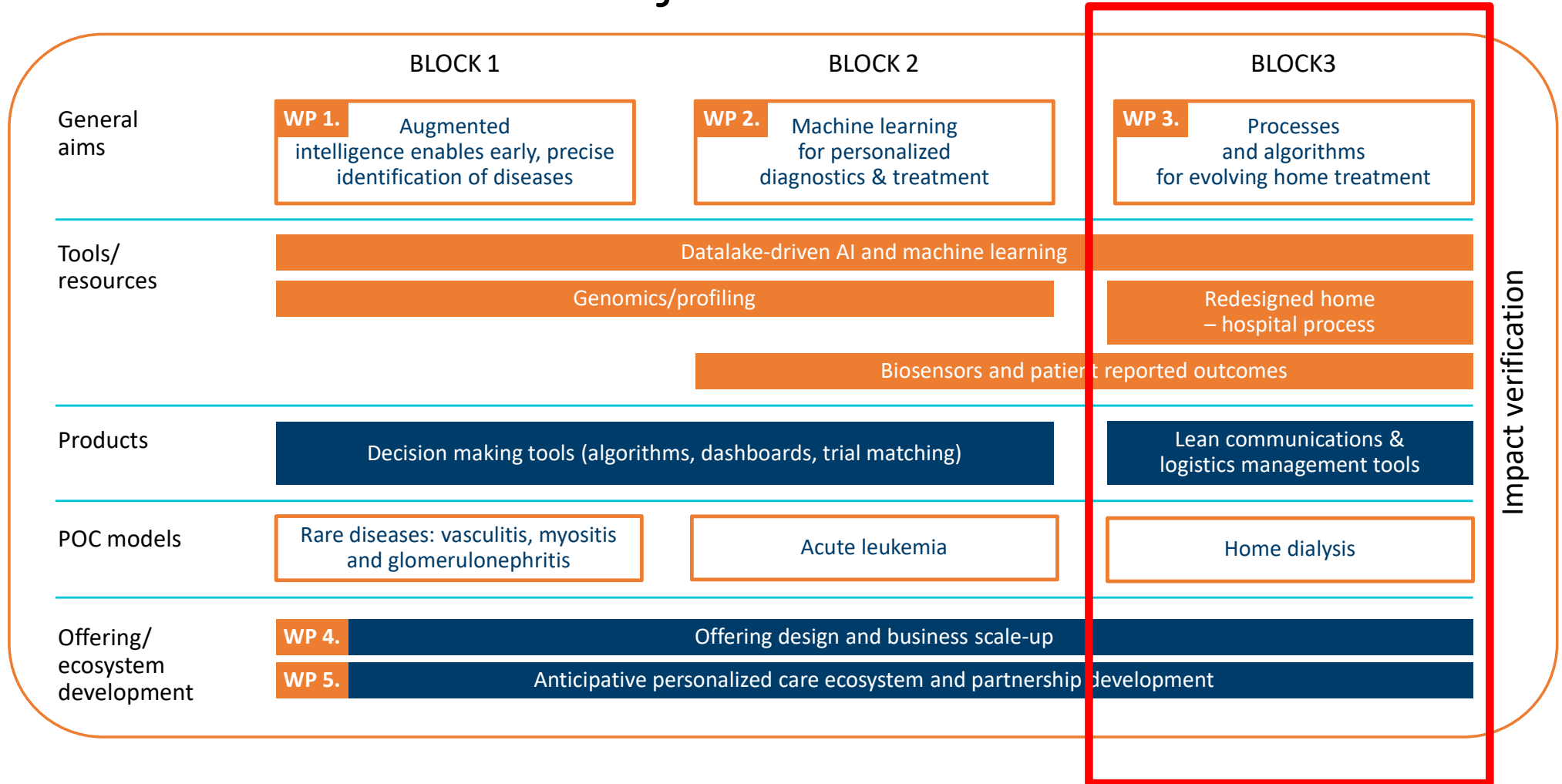


Ecosystem of digital health innovations

The world's fastest track for digital health and wellbeing innovations



eCare for Me – Project Structure



eCare for Me Homedialysis Solution

1. studying patient related factors, early in predialysis phase to **identify patients suitable for home dialysis**
2. using machine learning model/ augmented intelligence to create **algorithms helping patients and professionals to individualize home dialysis prescription and to identify risks**
3. analyzing current device and **consumable supply chain** practice to optimize it for patients and for hospitals, and for allowing cost-tracking
4. using **PROMs** and data produced by selected **sensors and devices** to identify patients in predialysis phase in risk of urgent start dialysis and patients in home dialysis in risk for complications and creating an application to be used for **communication channel** between patient and home dialysis personnel

CleverHealth Network Homedialysis study:

- 4 academic research groups:
 - Helsinki University Hospital, Nephrology
 - Aalto University (Information Technology, usability)
 - Aalto University, Hema Institute (Health service production and efficacy)
 - Helsinki University (Social psychology)
- Retrospective data from HUS datalake (2011-2020):
 - ca 2000 patients
- Prospective (sensor, device and supply chain) study:
 - 9/2020-6/2022: ca 500 patients
 - 150 predialysis patients
 - 100 home HD patients
 - 100 PD patients
 - 100 self care (satellite) HD patients

Want to know more about our digital innovations?

Digital Virtual Hospital
Kidney Hub
and
CleverHealth Network
eCare for Me :

Virpi Rauta
+358 405283147
virpi.rauta@hus.fi

Digital Virtual Hospital
Kidney Hub:

Pirgit Silvast-Äikäs
+358 406529927
pirgit.silvast-aikas@hus.fi

Want to
transform
Your
Hospital into
a Digital
Pioneer
together
with us?