



# Percutaneous Transhepatic Biliary Drainage (PTBD) for obstructive jaundice

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***NH Hotel Vienna Airport***



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## Declaration of conflict of interest

Type	Company
Employment full time/ part time	None
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Consultant/ advisory board	None

# Content



1. The nurse practitioner global
2. The nurse practitioner in the Netherlands
3. The nurse practitioner obstructive jaundice

# 1. The nurse practitioner global



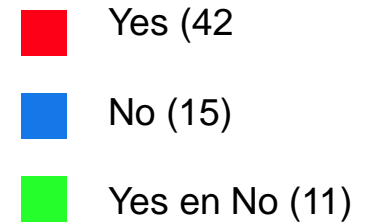
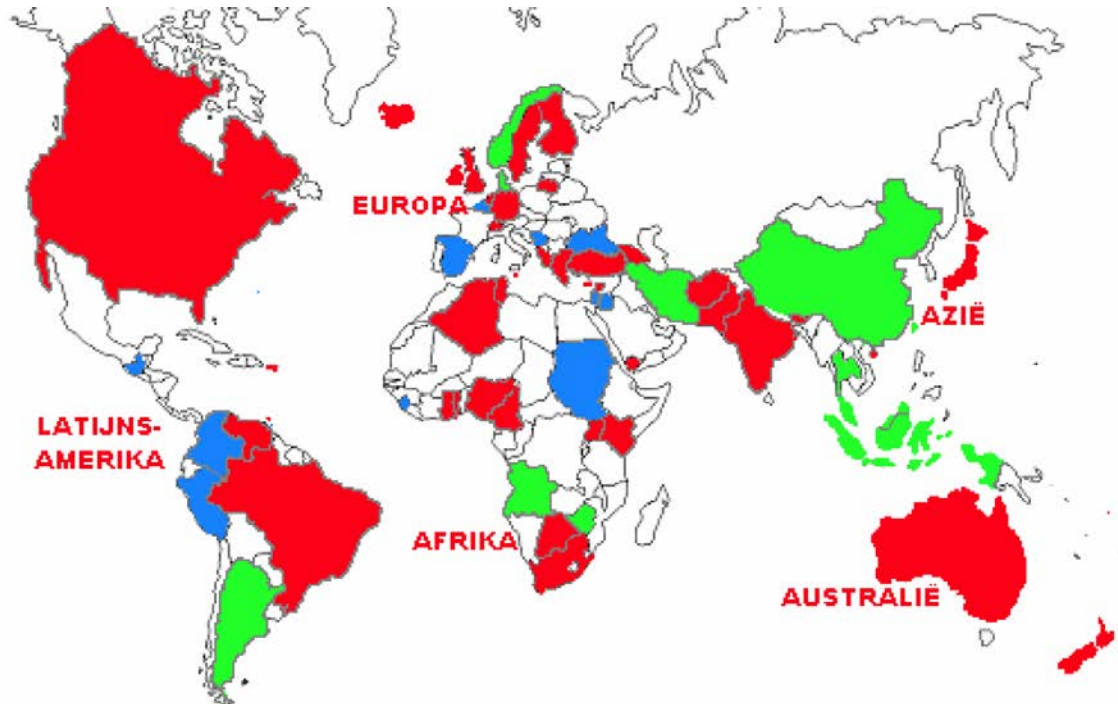
“A Nurse practitioner-advanced practice Nurse is a registered nurse who has acquired the expert **knowledge** base, complex **decision-making skills** and **clinical competencies** for expanded practice, the characteristics of which are shaped by the context and/or country in which s/he is credentialed to practice. A **master's degree** is recommended for entry level. ([ICN, 2001](#))”



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# Critical pathways in a global context

*internet survey*



*Roodbol 2004*

# Nurse practitioner profession United States 1965-2015



- 1965 shortage in available physicians, primary care providers... children in urban- and rural areas
- First NP program was founded at the university of Colorado
- 1970 master's degree
- 1973 65 NP programs
- 2000 legally able to practice in all states
- 2004 Doctor of Nursing Practice (DNP) degree



2015: 50 years, 205.000 licensed NP's

2025: 244.000 NP's

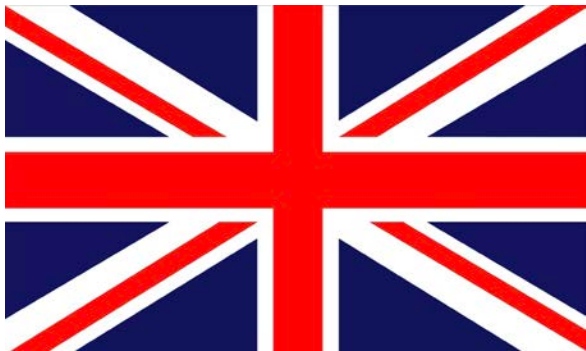


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# Nurse practitioner profession United Kingdom



- 1980 first NP in England
- 1997 recognition by the Royal College of Nursing
- 1999 registration system and protected title
- 2000 Anglo-saxon countries Australia, New Zealand and Canada



# Nurse practitioner profession The Netherlands 1997-2018



- 1997 first program, re-arrangement of tasks
- 2003 300 NP's graduated
- 2012 recognition by law, protected title nurse specialist
- 2015 grade MSc
- 2017 Milestone: 3000th nurse practitioner registered  
800 nurse practitioner trainee's
- 2018 fully legalized



Prof. Els Borst (1932-2014)



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## 2. Nurse practitioner (NP) in the Netherlands



- Master degree Advanced nursing practice
- 2 years education
- Title MSc
- Authority to:
  - 1 indicate, diagnose, prescribe and treat independently
  - 2 to refer to other professionals
  - 3 admit patients to hospital
- Specialized in- and focused on a specific patient population/condition

# Nurse practitioner roles

## THE CANMEDS COMPETENCY AREAS OF THE NURSE PRACTITIONER



## COMPETENCY AREAS

- 1 Clinical expertise:** the nurse practitioner as a practitioner with nursing and medical expertise.
- 2 Communication:** the nurse practitioner as a communicator.
- 3 Collaboration:** the nurse practitioner as a collaboration partner.
- 4 Organization:** the nurse practitioner as an organizer of quality of care improvement.
- 5 Health advocacy:** the nurse practitioner as a health advocate.
- 6 Science:** the nurse practitioner as an academic and researcher.
- 7 Professionalism:** the nurse practitioner as a self-confident professional.



# Science: the NP and research



Survey among NP's

Bridging the gap between scientific research and clinical practice?



Dutch scientific committee



# Preliminary data

## Characteristics (results)

Total: N=856/ 52 NP's in training excluded (May 17th)

N=804		N	%
Gender	Men	164	20.4
	Female	640	79.6
Age (yrs)	Median (range)	48 (25-65)	
Institution (N=797)	General practitioner	51	6.3
	Mental health	152	18.9
	Nursing home	77	9.6
	Homecare	14	1.7
	Revalidation	12	1.5
	Hospital/clinic	316	39.3
	University hospital	147	18.3
	Ambulance	12	1.5
	Other	16	2.0
Work experience (yrs)	Median (range)	5 (1-15)	
Study	Science of Nursing	34	4.2
	Finished after MANP	3	0.4

# Conclusion and discussion



Almost 40 (38%) of the NP's perform research independently

N=323 (40.2%)	<u>Reasons why not investigate</u>
64	No budget
40	<u>Role development</u>
76	<u>Lack of ambition/ motivation</u>
75	<u>Does not occur</u>
5	<u>External reasons</u>
63	<u>Job description</u>

- \* Np's do have potential to perform clinical research
- \* Research should be part of the job description

# Erasmus University Hospital



# 2018



39 Operating rooms



525 Single bed rooms



124 ICU beds



94 Daycare beds



31.925 Admissions



512.717 Outpatient clinic



# 3. The NP obstructive jaundice



## Patient population

- Malignancies:
- Pancreatic and peri-ampullary tumors
  - Hilar cholangiocarcinoma (Klatskin)
  - Mid cholangiocarcinoma (Bismuth 1)
  - Gallbladder carcinoma

- Benign diseases:
- Common bile duct lesions
  - Bile duct strictures (after hepaticojejunostomy)





# The nurse specialist in a university hospital



1. Patient care

2. Education

3. Research



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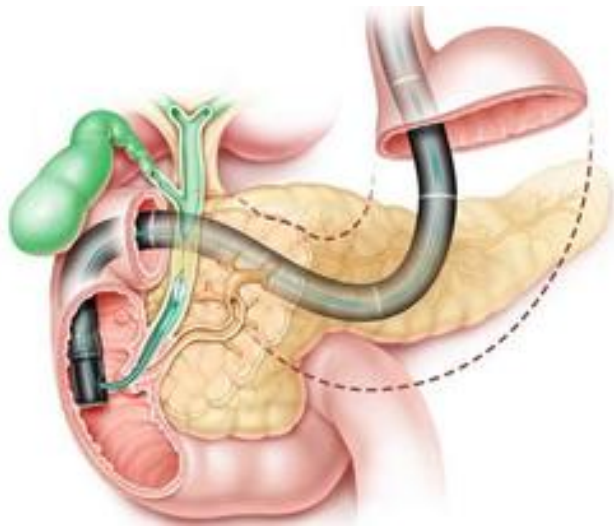
# Nursing Research



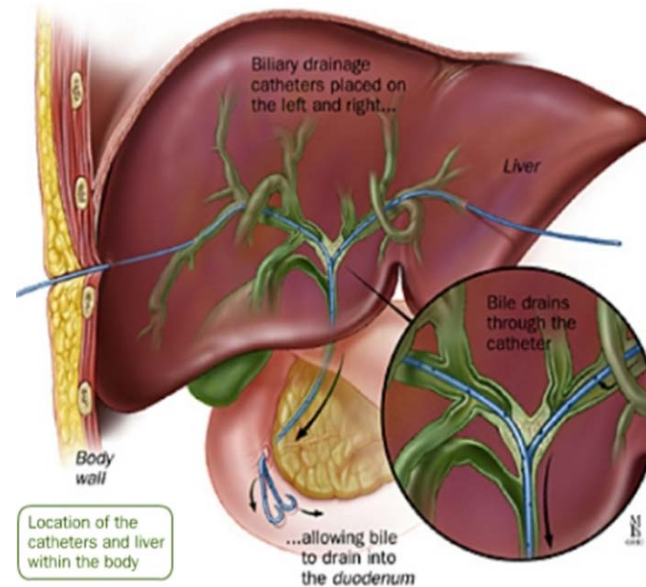
- Coordination clinical- (medical-) multi disciplinary- and multicentered studies
- Nursing research (PhD)
  - Role development NP and research
  - Biliary drainage
  - Post-operative complications pancreatic surgery
  - Discharge from hospital after pancreatic surgery
  - HPB patient need for information



# Biliary drainage



ERCP

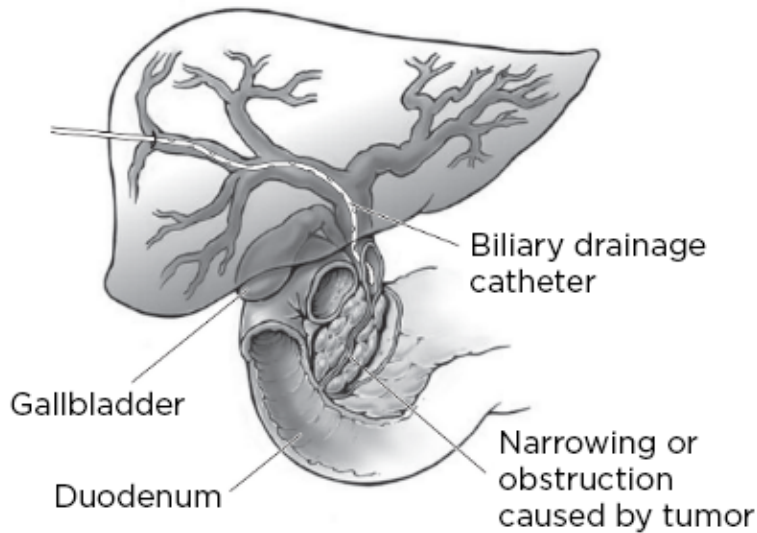


PTBD

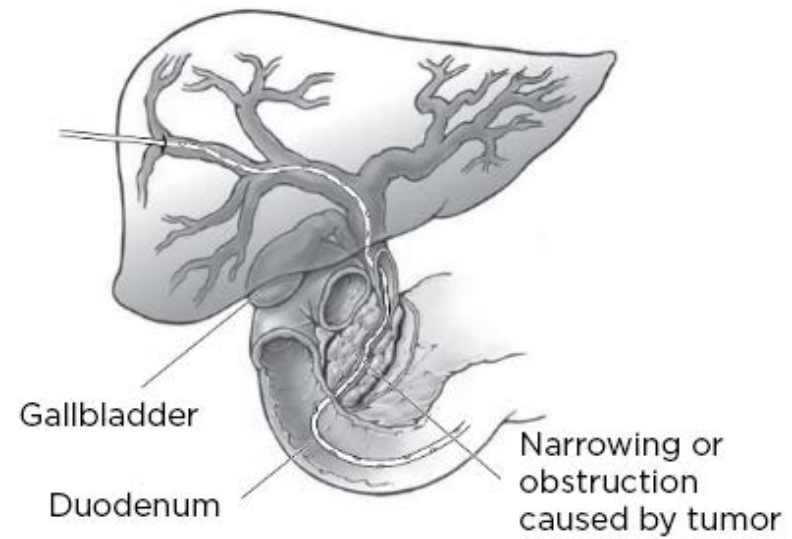
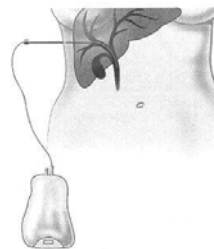


PTBD drainage catheter placement

# External- and internal drainage



External drainage



Internal drainage

# Post interventional complications



## Common

- Acute cholangitis
- Sepsis
- Bleeding

## Rare

- Biloma
- Intrahepatic hematoma
- Biliovenous- or biliopleural fistula
- Pneumothorax
- Peritonitis
- Perforation
- Acute pancreatitis



# Nursing care



## Observations

- Vital signs and fever
- Leakage around the catheter
- Skin comfort
- Catheter fixation
- Catheter production
- Flushing preventing clogging

## Management

- Teaching patients
- Contactperson in case of problems



# Daily practice



Questions

By nurses & other healthcare professionals

Patients & family

Medical specialists



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## A National Survey on Peri-interventional Management of Percutaneous Transhepatic Biliary Drainage

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# Rationale



- Difficult procedure with a high risk of complications
- Complications and risks
- Incidence



## Aim of the study

To explore the level of knowledge about the procedure and catheter care of PTBD amongst HPB nurses in the Netherlands, working at the department of gastrointestinal surgery or gastroenterology in a general hospital where PTBD is a common procedure.

# Material and methods



## Questionnaire Developed by

- Group of multidisciplinary professionals specialized in HPB (hospital)
- Reviewed by a national team of HPB nurses

## Contents

- Part 1: How the respondent estimates their own knowledge and the knowledge of their colleagues (sufficient?)
- Part 2: Questions about the preparation of PTBD
- Part 3: Management after placement of the PTBC
- Part 4: Logistics at hospital discharge after PTBD



# Inclusion



## Inclusion

- Registered nurses
- Working at the department of gastroenterology or gastrointestinal surgery

## Exclusion

- Questionnaires from hospitals who treated < 3 patients with a PTBDC a year



# Analysis



## Closed questions

- Presented in percentage of the total responding nurses

## Open-ended questions

- Classified in categories

## Normally distributed variables

- Presented as mean (standard deviation)

## Non-normally distributed variables

- Presented as median (interquartile range)



# Conclusions



- Knowledge about PTBD is classified as low
- Low protocol adherence
- Many different ways of dressing and fixating the catheter
- Low patient teaching
- Low information about a contactperson

# Recommendations



- Education program for specialized nurses
- Centralization placement procedures





## Hospital/ region

- Education, bedside teaching ward
- Jaundice clinic
- Research

## National

- E-learning
- Awareness

# Thank you for your attention!



Thanks to:

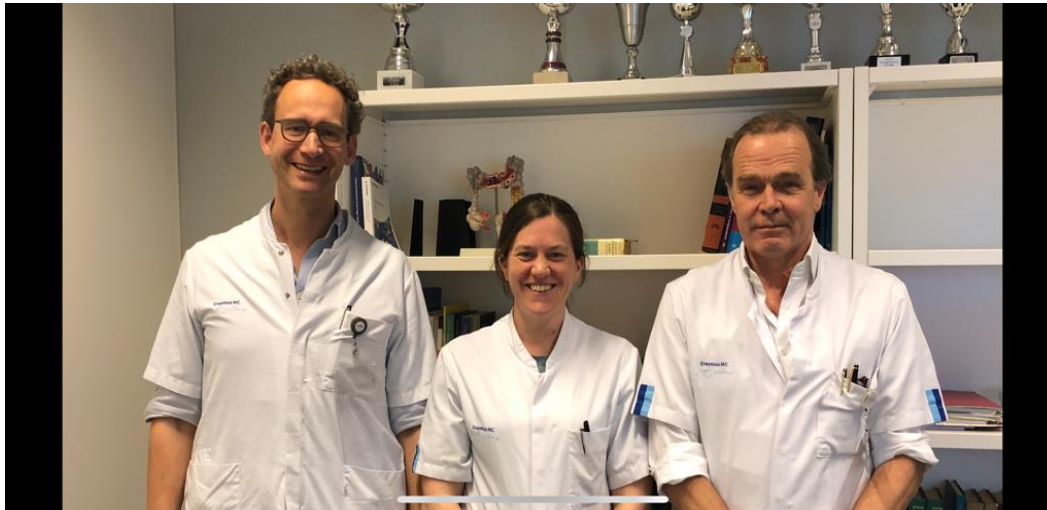
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