

# Training of medical specialists C-arm in the Operation Room

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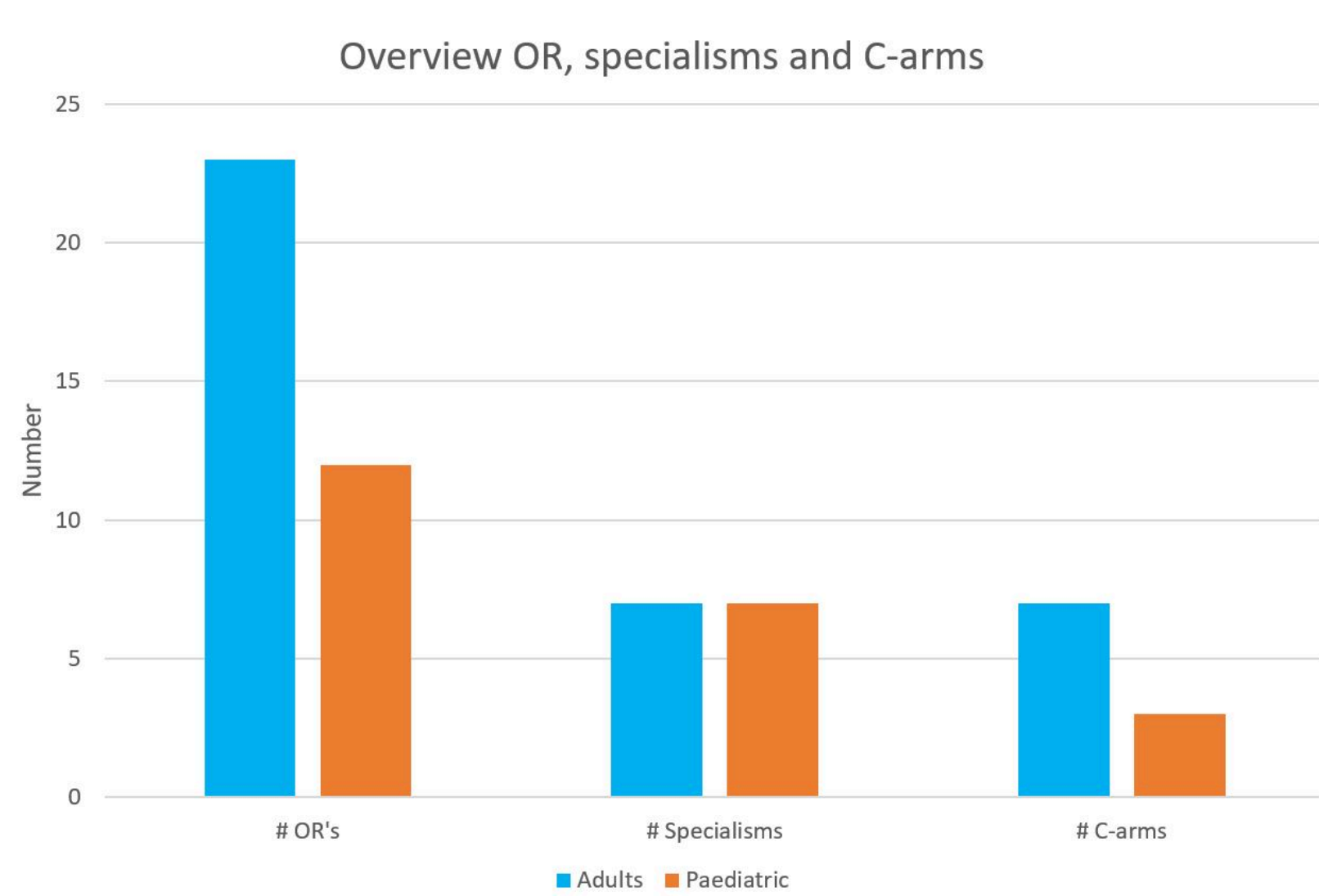


## Purpose

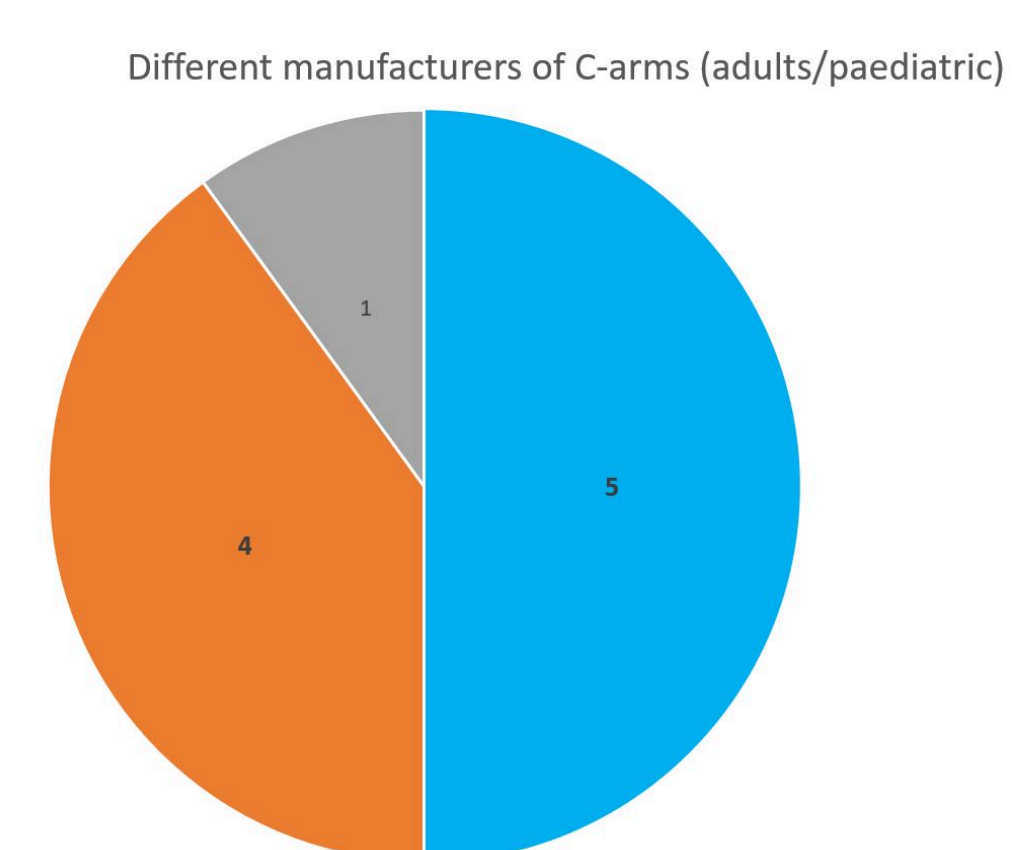
The aim of the training program is to ensure that the specialists who use the C-arms obtain up-to-date skills, competences and knowledge in the use of the device, thereby optimizing radiation exposure in OR.

## Introduction

In the University Medical Center (UMC) Utrecht, procedures with X-ray imaging in operating rooms are performed by the surgeon supported by operation assistants. The UMC Utrecht has 35 OR's in different locations.



At these sites, 10 mobile C-arms are in use from 3 different manufacturers.

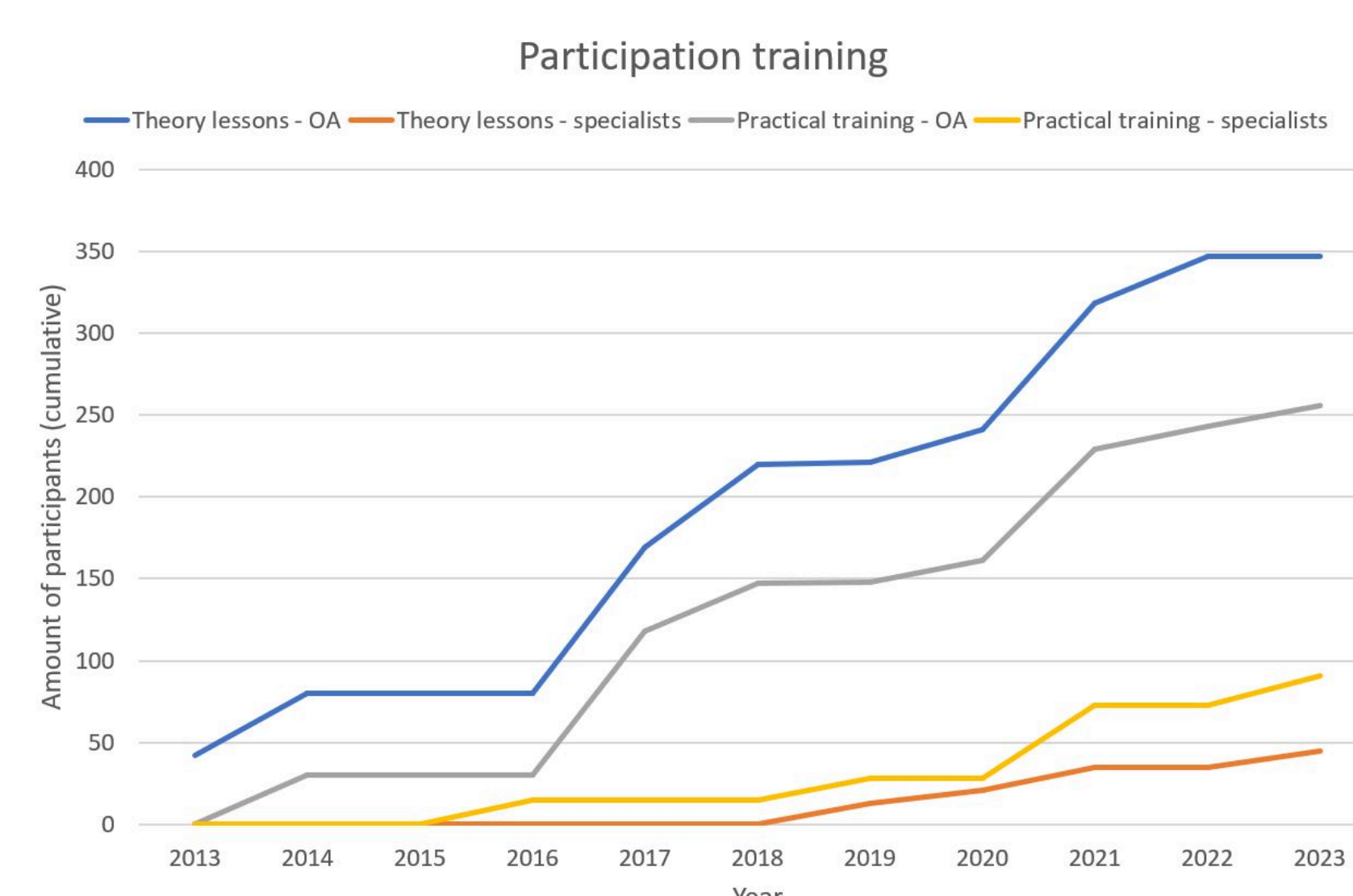


It is a challenge to get and keep all staff involved, adequately skilled in working with the different C-arms in various situations.



## Training Program

In recent years, the radiation protection department set up a theoretical and practical training program. For operation assistants the training started decades ago. As of 2019 this program was expanded with classes for surgeons.



It was a challenge to get all staff involved. This was achieved by providing support in radiation protection in the workplace and by staying in close contact to the staff and surgeons in the workplace.



The practical training was given by the manufacturer. To arrange this it was important to make sure the operation room and all materials needed (including X-ray dummy) during the training were readily available.

## Results



In the last 3 years 60 medical specialists attended the practical training. This is an increase of 75%



A total of 350 surgeons and operation assistants attended the practical training



The theoretical training was given to a total of 400 employees over the past 10 years



Several medical specialists requested a refresher to be organized at the end of 2023

## Success factors

- Visible involvement of the radiation protection officer (RPO) in the OR and training sessions
- Highly motivated specialists in the OR (key figures)
- Periodically offering of theory and practical trainingsessions
- The use of an x-ray dummy to simulate reality during the practical sessions
- Up-to-date knowledge of the RPO by attending procedures and training sessions
- Involvement of surgeons during planning of training sessions

## Conclusion

It is important to involve surgeons/users of the C-arm by the organization of the training sessions. The success(rate) of our training sessions grew during the past years. For a complex location, like the OR's in the UMC Utrecht, enthusiasm, involvement and a lot of patience is required. Training medical specialists is an ongoing process; with our set-up, a successful, workable foundation was laid