

# 'Shouldn't you be thinking about work now?'- Employment status and influencing clinical factors in people with CF at a large UK adult centre

J.Wainwright<sup>1</sup>, C.Brown<sup>1</sup>, J.Choyce<sup>1</sup>, L.Jones<sup>1</sup>, S.Ojo<sup>1</sup>, N.Patel<sup>1</sup>, R.Rashid<sup>1</sup>, K.Wickham<sup>1</sup>, J.L.Whitehouse<sup>1</sup>

<sup>1</sup> West Midlands Adult Cystic Fibrosis Centre, Birmingham UK

## Background:

CF impacts on employment. Targett et al (2014) found that a change in symptoms and health status with Highly Effective Modulator Therapy (HEMT), reduced hospital admissions and therefore a change in pwCF's ability to work.

## Aims:

To explore the current employment status and the clinical factors associated with this in pwCF.

## Methods:

A retrospective audit of employment and clinical status of a random sample of 106 of our 360 adult CF patients at our large regional UK adult CF Centre.

## Demographics:

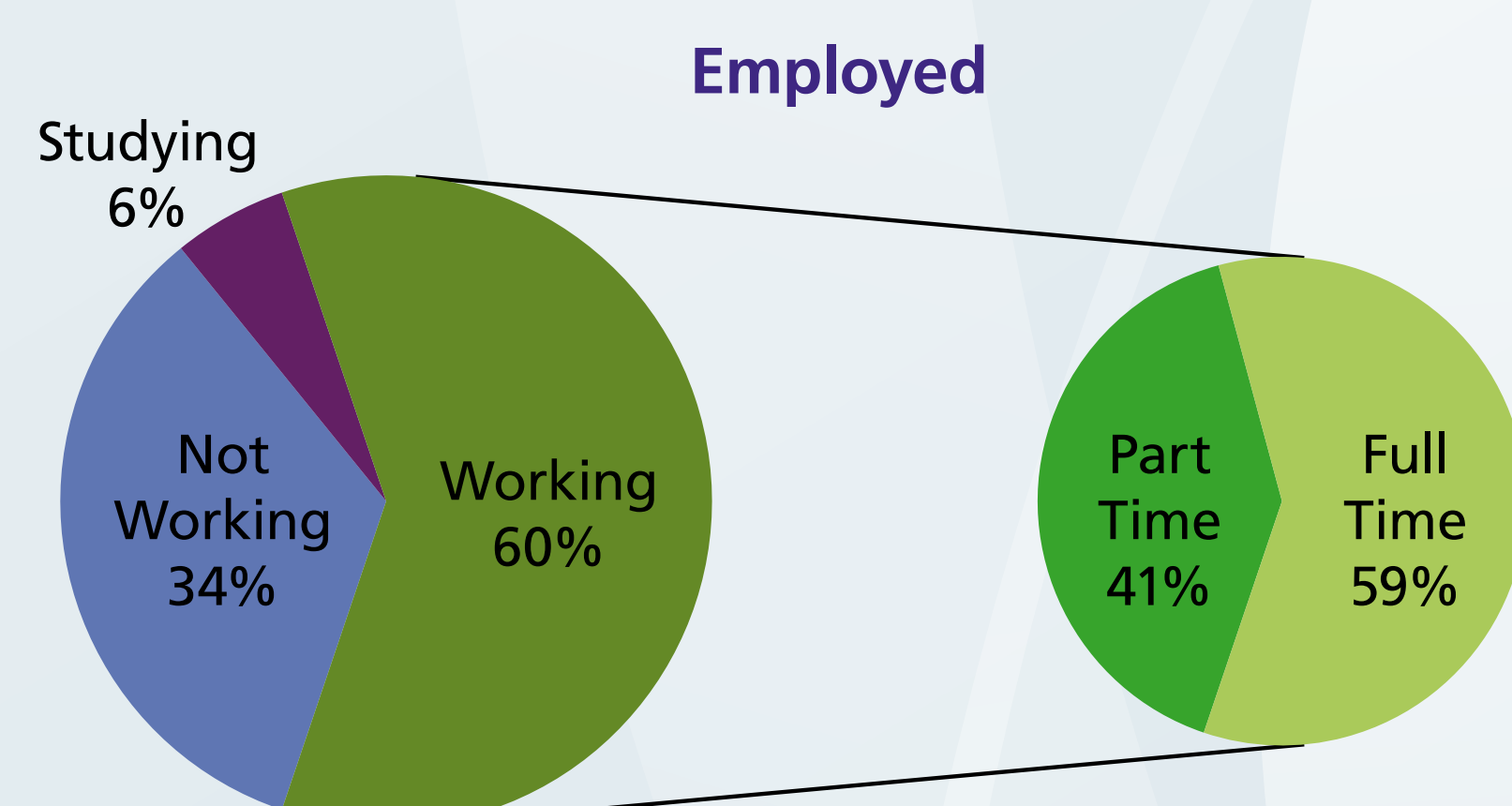
- Median age 32 (IQR 26-42);
- 42% (45) Female; 58% (61) Male
- Median ppFEV<sub>1</sub> 72% (IQR 55-91);
- 50% (53) CFDM;
- 70% (74) with chronic or intermittent PsA; 5% (5) with B.Cepacia; 3% (3) with M.Abscessus;
- 81% (86) on Kaftrio; 2% (2) on Ivacaftor; 17% (18) not on HEMT, 5% (5) post lung transplant;
- Median bed days 0 (IQR 0-4);
- Median CFHH adherence 24% (IQR 0-68%).



## Employment:

- 60% (64) were employed, 34% (36) were not employed, 6% (6) were in education.
- Of those employed, 59% (38) worked full time; 41% (26) part time. (Figure 1)
- Of those employed 14% (9) work from home (WFH); 8% (5) mix WFH and in workplace; 78% (50) in workplace.

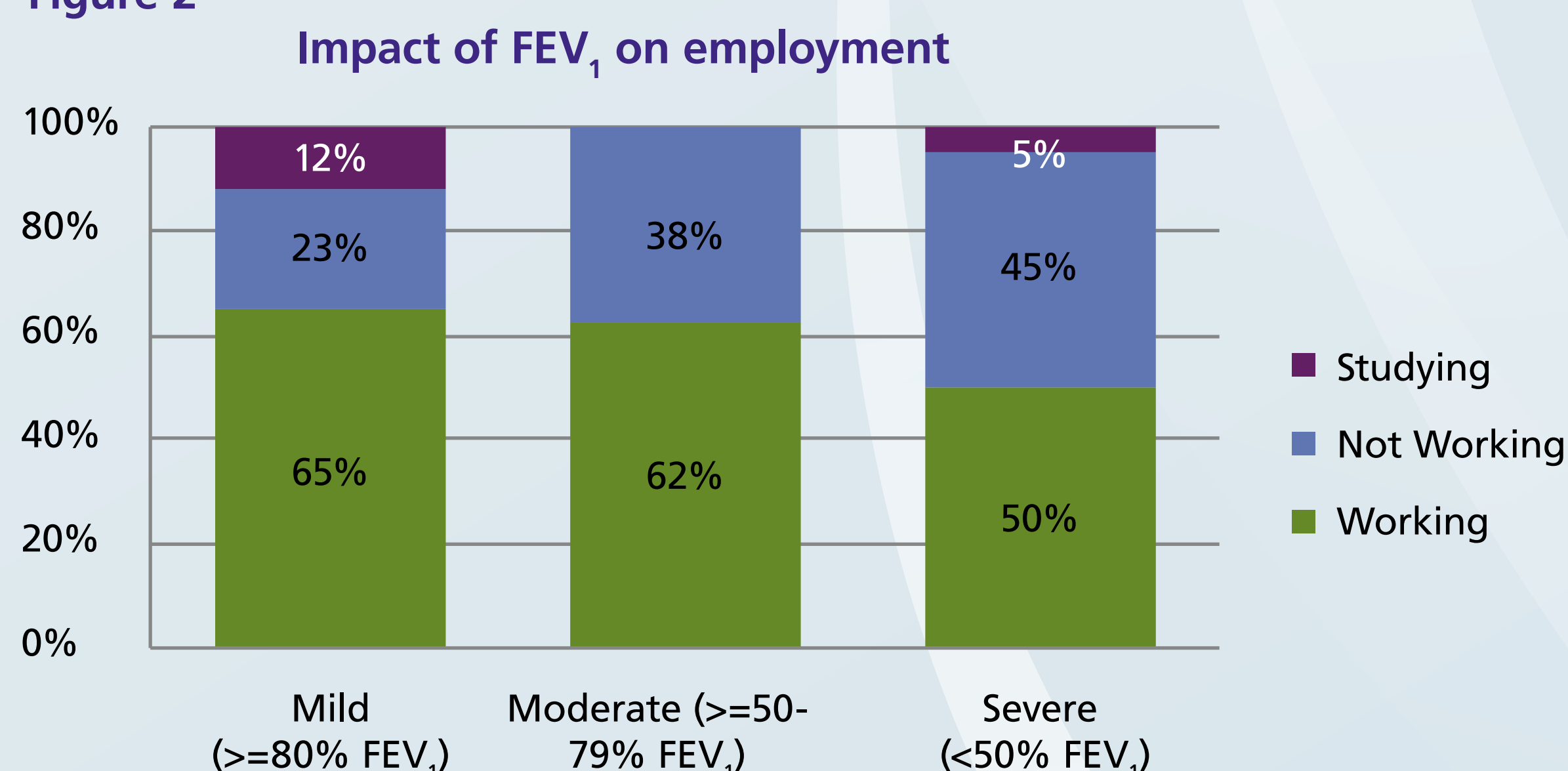
Figure 1



## Clinical factors:

- Median ppFEV<sub>1</sub> was lower in those not employed compared to employed (67% (IQR 50-82%) vs 75% (IQR 58-92%)).
- Fewer with 'severe' ppFEV<sub>1</sub> (<50%) were employed or studying than those with moderate (50-79%) or mild (>79%) ppFEV<sub>1</sub>. (Figure 2)

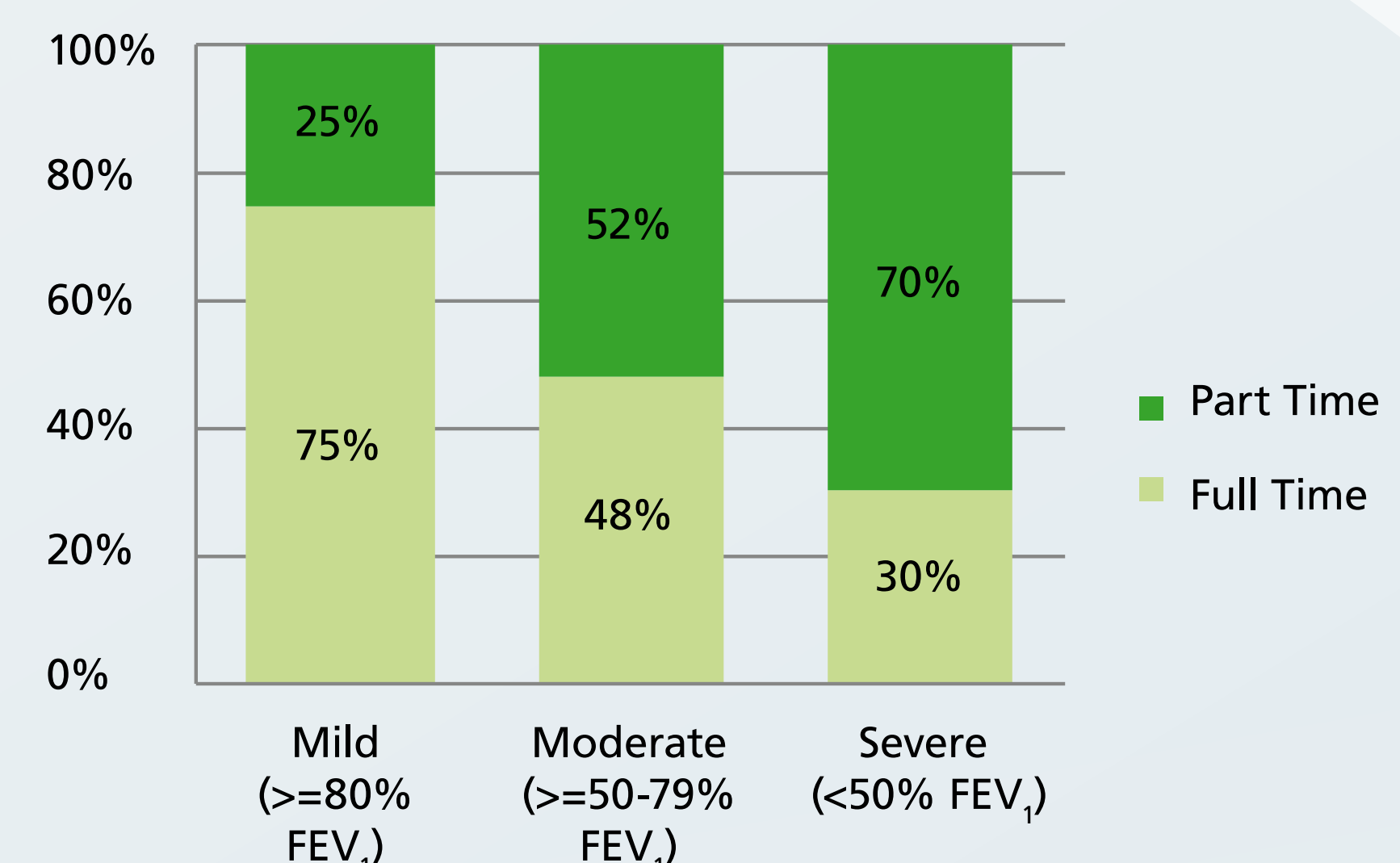
Figure 2



- In those who were employed, ppFEV<sub>1</sub> appeared to influence time spent at work, with 30% of those with 'severe', 48% of 'moderate' and 75% of 'mild' ppFEV<sub>1</sub> working full time. (Figure 3)

Figure 3

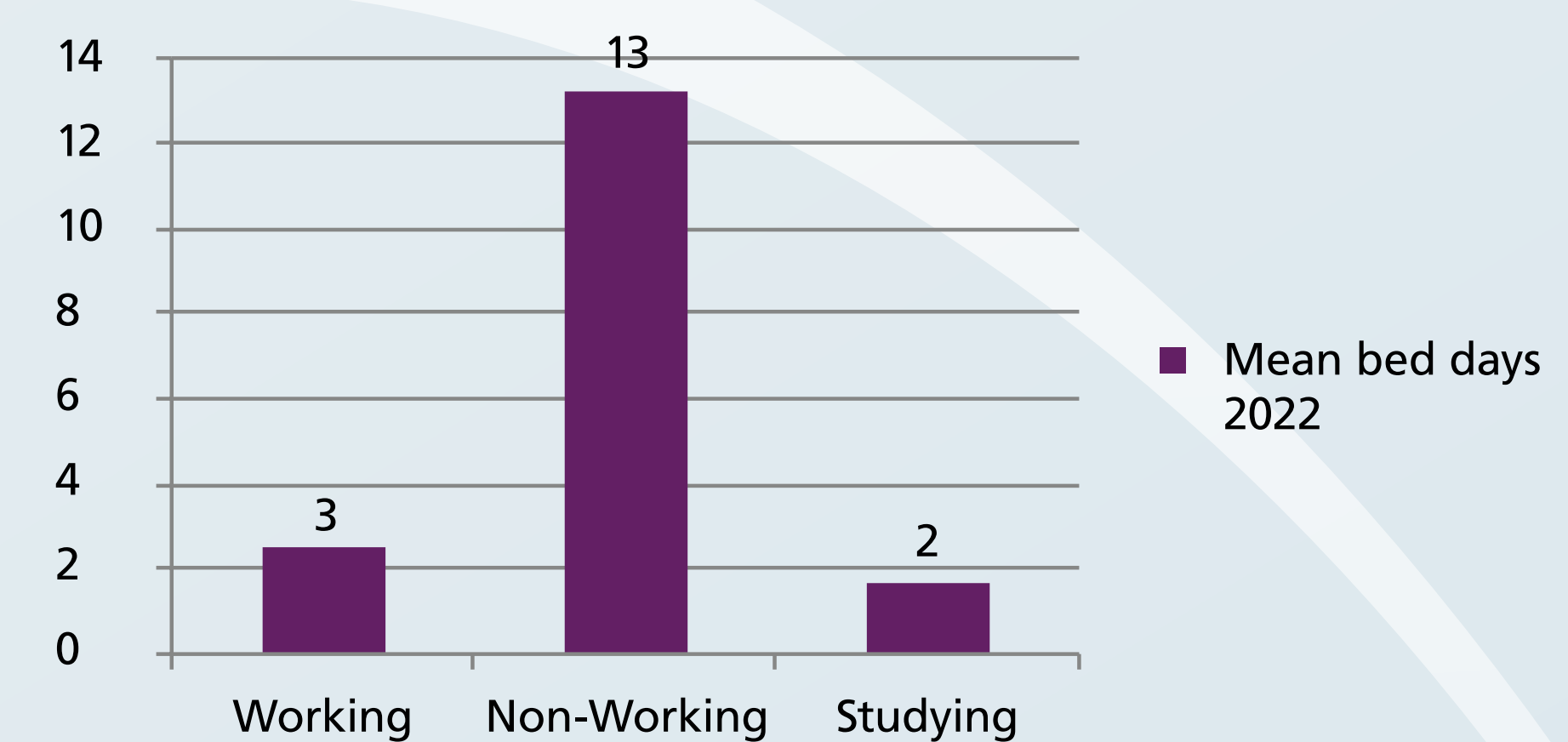
Impact of FEV<sub>1</sub> on working hours



- Rates of WFH were not dependent on ppFEV<sub>1</sub>.
- PsA was more common in those not employed compared to employed (83% vs 61%). Having no significant respiratory pathogen was more common in those employed compared to not employed (31% vs 8%).
- Average bed-days over the preceding 12 months was higher in those not employed compared to those employed (13 (SD 29) vs 3 (SD 6) days). 75% (55) of those who had no bed days (73) were employed or in education, compared to only 47% (16) of those who had had 1 or more bed days (34). (Figure 4)

Figure 4

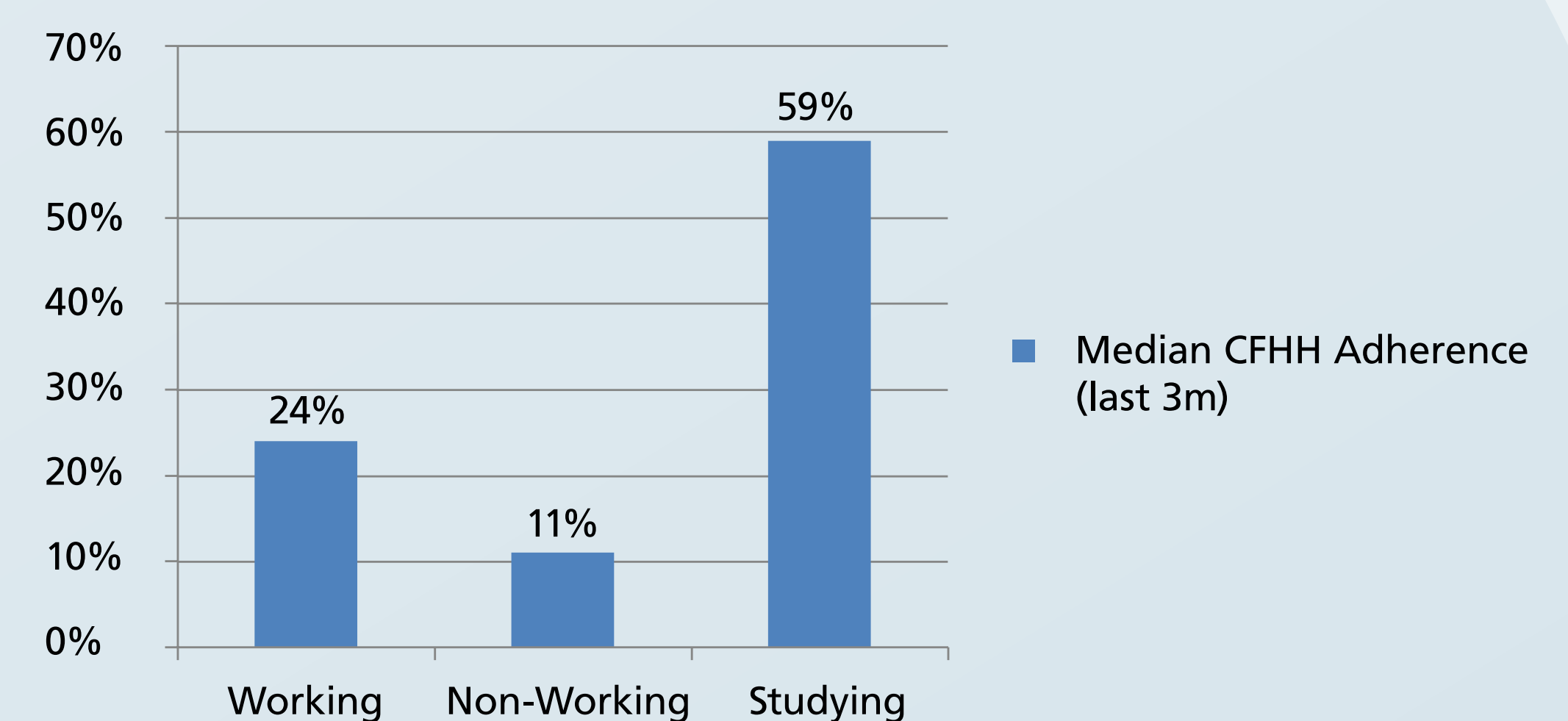
Bed days 2022



- 42% (44) were registered on CFHH. Adherence on CFHH was lower in those not employed than those employed (Median 11% (IQR 0-54) vs 24% (IQR 5-69%). (Figure 5)

Figure 5

Median CFHH Adherence (last 3m)



- The proportion on HEMT was 83% in both not employed, employed and studying groups.
- Days on HEMT (Median 807 vs 797 vs 786 days) were similar in both not employed, employed and studying groups.

## Conclusion:

- Clinical parameters such as ppFEV<sub>1</sub>, PsA and bed-days appear to influence patient choice and ability to work. PwCF with lower ppFEV<sub>1</sub> tend to work less.
- The impact of Covid-19 on working patterns has not been as significant as predicted with fewer pwCF working from home than expected.
- The number of bed days is higher in those not employed compared to those employed.
- HEMT usage is consistent in employed, not employed and studying groups.

## Further research:

- To include IV days as well as bed days to assess the impact of pwCF having IV's at home.
- Assess how being a pwCF and a parent impacts upon employment.
- Assess the scale and proportion of pwCF receiving disability benefits and the impact of this upon hours worked per week.

## Reference:

Targett, K ; Bourke, S ; Nash, E et al.(2014) Employment in adults with cystic fibrosis. Occupational Medicine. Vol. 64, No. 2. pp. 87-94.