

# INTER DIALYTIC WEIGHT GAIN AND ULTRAFILTRATION GOAL OF POST COVID-19 AMONG HEMODIALYSIS PATIENTS IN RIAU PROVINCE: A DESCRIPTIVE STUDY

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## Article Information

Received: 15 December 2023

Revised: 15 September 2024

Accepted: 21 Oktober 2024

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## DOI

10.20884/1.jks.2024.19.3.10782

## ABSTRACT

Key indicators for assessing the adequacy of hemodialysis include Inter-Dialytic Weight Gain (IDWG) and Ultrafiltration Goal (UFG), both of which are closely related to patients' hemodynamic status. However, there is limited information on the specifics of IDWG and UFG, particularly in Riau Province. This quantitative study with a descriptive design aims to describe IDWG and UFG in the aftermath of the COVID-19 pandemic in Riau. The research was conducted across three regional hospitals in Riau Province, involving 138 hemodialysis patients. This study employed univariate statistical analysis, using secondary data as the primary source. The findings indicate that in the first four months following the COVID-19 pandemic among hemodialysis patients in Riau Province, the average UFG and IDWG levels exhibited fluctuations, with IDWG in the three hospitals ranging from 2.28 to 3.12, while UFG was between 2.13 and 3.09. The results suggest that stabilizing IDWG and UFG is crucial to prevent complications arising from these fluctuations, such as activation of the renin-angiotensin-aldosterone system, stimulation of the sympathetic nervous system, and increased cardiac output.

Keywords: *Inter-dialytic weight gain; ultrafiltration goal; haemodialysis*



ISSN : 1907-6637

e-ISSN : 2579-9320

## INTRODUCTION

During the Covid-19 pandemic, significant changes occurred in hemodialysis patients, both in terms of patient conditions and hemodialysis therapy services provided. No study has specifically assessed hemodialysis therapy in patients receiving adequate hemodialysis in the province, especially in the post-Covid-19 in Riau, most research has concentrated on diseases affecting coastal communities or the behavior and influence of the coastal environment on public health (Indonesian Renal Registry, 2017; Neuman, 2019; Linberg, 2020; Muttaqin, 2019; Widyastuti, 2020).

Riau Province covers an area of 87,023.66 km<sup>2</sup>. It comprises both land and water, featuring numerous islands along the Malacca Strait (Indonesian Renal Registry, 2017). Many residents inhabit coastal areas, but environmental conditions and community habits can affect health. One prevalent

disease among coastal communities is chronic kidney disease (Septiwi, 2019).

According to the Indonesian Renal Registry report (2017), the number of patients undergoing hemodialysis increased from 30,554 patients in 2015 to 52,835 patients in 2016, and further rose to 77,892 patients in 2017. If each patient undergoes hemodialysis 2 to 3 times a week, this results in approximately 155,784 to 233,676 hemodialysis treatments performed weekly. In Riau Province, it is estimated that around 800,000 individuals suffer from chronic kidney disease, yet only 2-5% of them receive hemodialysis treatment.

An essential aspect of assessing hemodialysis therapy is measuring IDWG (Interdialytic Weight Gain) and UFG (Ultrafiltration Goal). The IDWG is crucial because the increase in fluid volume, shown through an increase in body