

BLOOD DONATION IN GREECE IN THE ERA OF SARS-CoV-2 PANDEMIC

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Background

- The SARS-CoV-2 pandemic and the consequent restrictive measures affected blood donation in many countries worldwide.
- Under the pandemic situation, the lockdown has played a decisive role in the prevention and control of COVID-19 but has had a negative impact on blood donation.
- especially in countries like Greece where almost all blood collection sites except mobile drives are located at Hospitals Blood transfusion departments

Background

- In Greece blood supply relies solely on voluntary donations and blood donors consist of four groups
 1. **Individual Blood donors** donate blood individually at Blood Services in hospitals or at mobile drives
 2. **Blood donors Associations** consist of people sharing the same activities or working place and donate regularly on pre-set dates and collection sites.
 3. **Replacement donors** are non-remunerated blood donors recruited from the family and social environment of patients,
 4. **Military blood donors** consist of people doing their compulsory military service, military officers and employees that donate blood on pre-set dates and collection sites at military installations.

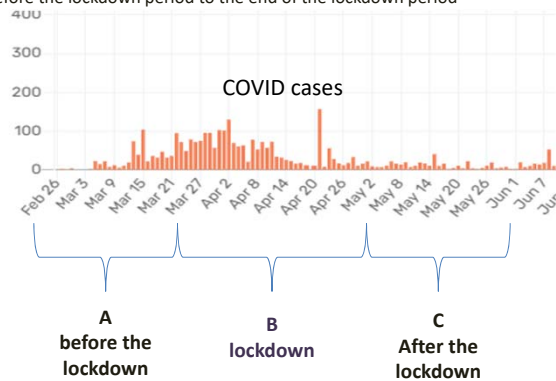
Aims

- The aim of the study was
- to record the impact of the first phase of the SARS-CoV-2 pandemic in blood donation in Greece.

Methods 2

- The study was conducted during a 14-week-period from 26 Feb. 2020 when the first CoVid case in Greece was reported to 1-6-2020 with the gradual recall of most restrictive measures
- The study period was divided in:
 - A. Period before the lockdown (26/2/2020-22/3/2020) which was announced on 23rd March by the Greek government
 - B. Lockdown-period (23/3/2020-4/5/2020) to 4th May
 - C. Period after the lockdown (5/5/2020- 1/6/2020) with the recall of almost all restrictive measures

It is worth noticing that elective surgeries except emergent and malignancy cases were canceled from 13th March before the lockdown period to the end of the lockdown period



Methods 3

Recorded data that concerned

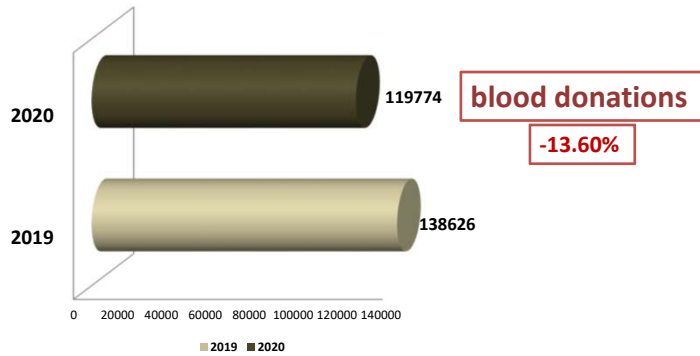
- blood donations,
 - blood-donors' group
 - individual volunteers,
 - replacement donors,
 - blood-donors associations,
 - military donors, and
 - demographic data
- were compared to data from 2019.
- Data were collected from the
 - National Blood Donors Registry and the
 - Hellenic National Blood Transfusion-Center.
 - Statistical analysis was performed via SAS 9.4.



Results

During the 14 weeks of the study period, in 2020, 119.774 blood donations were recorded, while during the same period in 2019, 138.626 whole blood donations were collected.

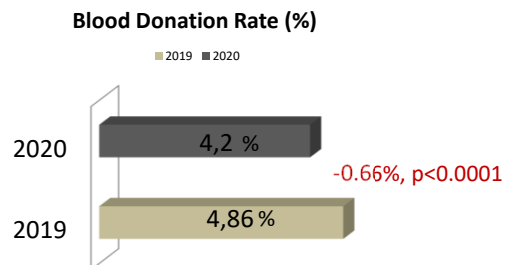
As you can see there was a reduction of -13.60% in relation to 2019 (18.852 donations)



Results

Considering an estimated population in Greece of 10.724.599 inhabitants for 2019, the blood donation rate (BDR) adjusted for the study period was 4.20% for 2020 and 4.86% for 2019

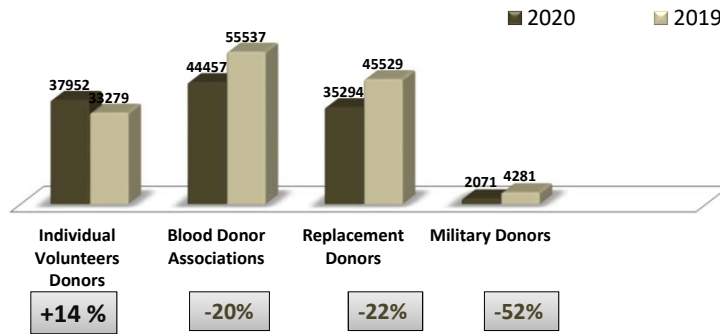
(Difference: 0.66%, 95% CI: 0.64% – 0.68%, $p < 0.0001$).



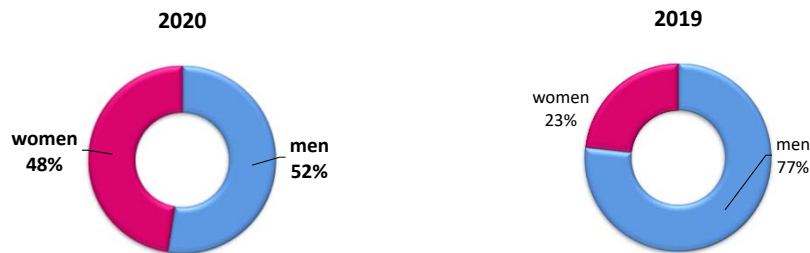
Which means that the overall effect of the pandemic for Greece considering blood donations was a reduction of 0.66% in the BDR for the study period, which was statistically significant.

Blood donations by each group of blood donors

- It is worth noticing that during the study period:
 - ✓ The group of individual volunteers donors was mobilized and provided +14.04% (4673) more units in 2020 than in 2019
 - ✓ while Blood Donor Associations, Replacement Donors and Military Donors reduced their donations by -19.95%, -22.48% and -51.62% respectively

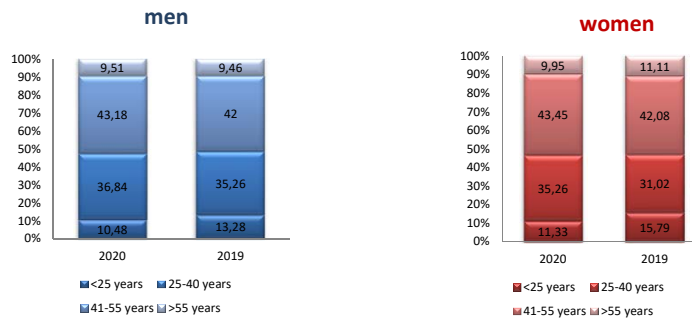


In 2020 Men represented the 52% and women the 48% of blood donors, while in 2019 the 77% and 23% respectively ($p < 0.0001$).

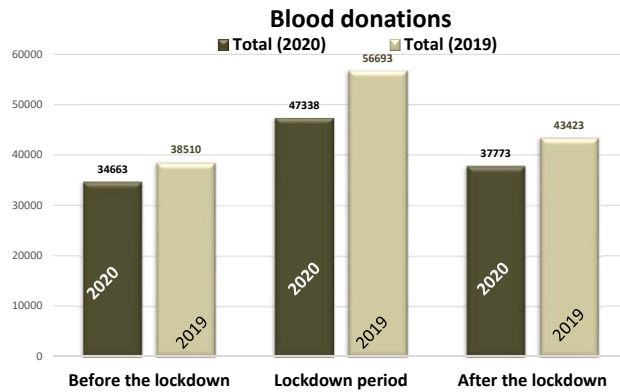


Age distribution

- Age distribution of blood donors during the study period in 2020 was not different than 2019
- For men: <25 years: 10.48% vs 13.28%, 25-40 years: 36.84% vs 35.26%, 41-55 years: 43.18% vs 42.00%, >55 years: 9.51% vs 9.46%. For women: <25 years: 11.33%, vs 15.79%, 25-40 years: 35.26% vs 31.02%, 41-55 years: 43.45% vs 42.08%, > 55 years: 9.95% vs 11.11%.



Blood donations during each period meaning before the lockdown during the lockdown and after the lockdown in 2020 were less than 2019

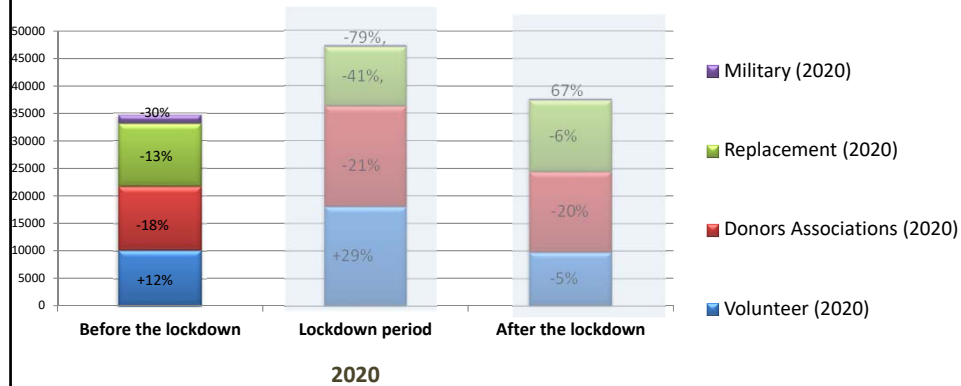


Blood donations per blood donors' group in 2020 is depicted

As you can see

In the period before the lockdown volunteer donors in 2020 increased their donations by +12.42% vs 2019

while blood donors associations decreased donations by -18.35%, replacement donors decreased by -13.02% and military donors decreased by -30%



Conclusions

- In Greece, as in other countries, a (14%) reduction of blood donations during the first phase of the pandemic was observed

Conclusions

- ✓ **Increased donations from individual volunteer donors** during the lockdown, highlight the mobilization of citizens who responded to public awareness campaigns by the National Blood Transfusion Center.
- ✓ It also reveals the effectiveness of adapted practices that Blood-Transfusion Services implemented to mitigate the risk of donor-exposure to SARS-CoV-2
 - ✓ (ie switching blood-collection sites to open air locations, scheduling appointments for blood-donations, adjusting operating hours etc).

Conclusions

- ✓ **Donations from volunteer blood donors associations and military-donors** were more affected by the lockdown, most likely due to cancellation of scheduled mobile blood-drives, especially in the first weeks of the pandemic.

Conclusions

- ✓ **Donations from replacement donors**, although being reduced due to the elective surgeries cancelation, still represent a significant part of the daily blood supply in our country.
- ✓ This may possibly reflect the volunteer donors' tendency to donate blood as replacement donors especially in periods of inadequate blood supply, which raises concerns about the system's ability to cover blood transfusion demands.